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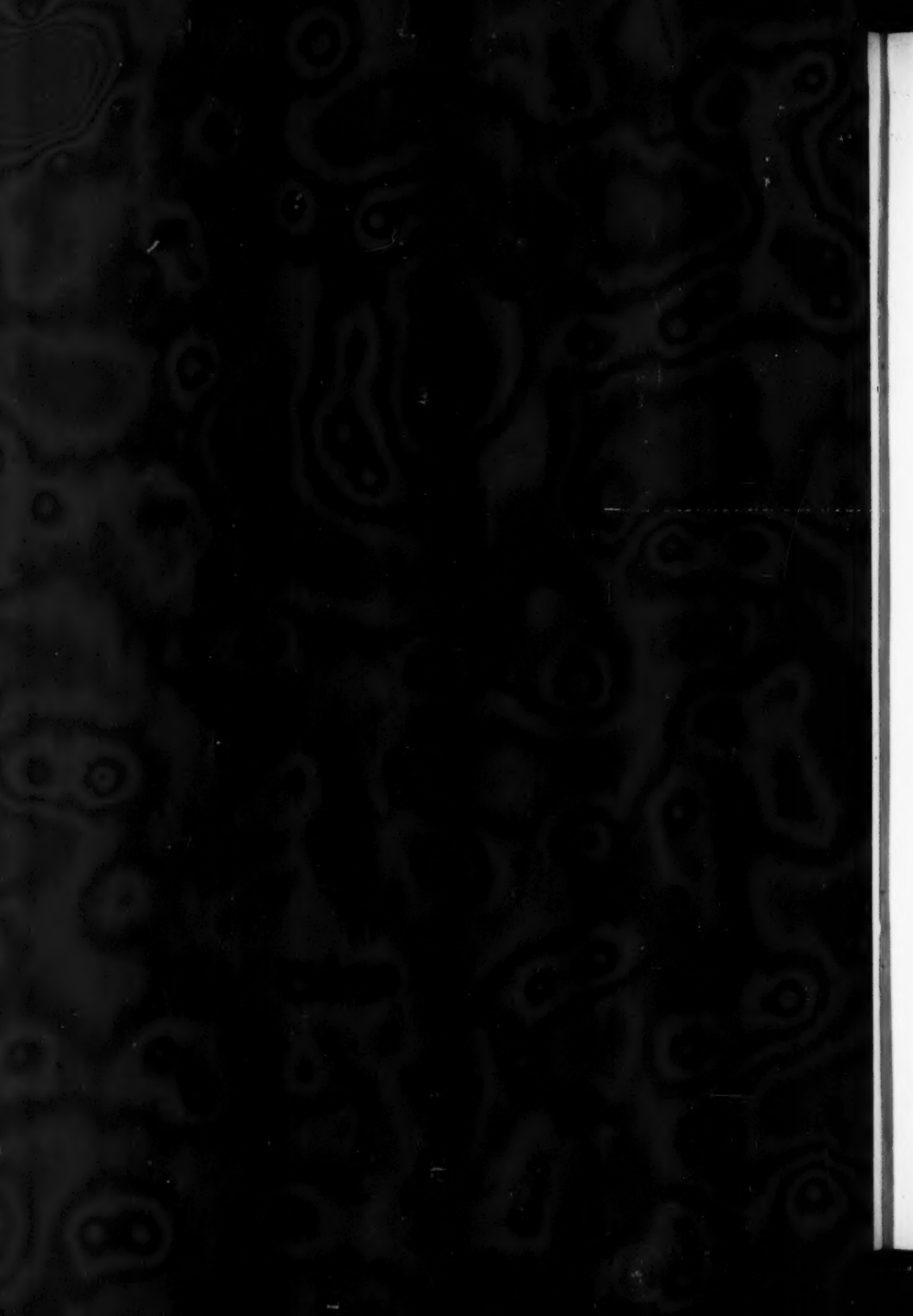
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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

REPORT OF THE COMMITTEE ON OTOLOGY.*

BY W. CHEATHAM, M. D.
CHAIRMAN.

As Chairman of the Committee on Otology, I can find no theme in this department which is more important or more likely to interest the members of this Society than the proper management of *Acute Catarrh of the Middle Ear*, better known as *earache* and *acute suppuration of the middle ear*.

The treatment of these affections has recently changed in some respects, having been not only simplified but greatly increased in efficacy. This is one of the subjects upon which too much can not be said or written. To the bad management of acute catarrh can be traced by far the greater number of those intractable cases of chronic non-suppurative inflammation of the middle ear, with which we are all familiar; while to the neglect or improper treatment of both varieties of the disease are chargeable not only many deaths but often sufferings worse than death.

I shall, in presenting this subject to the Society, endeavor to make it as purely clinical as possible, and with that view shall report such cases as have come under my observation during the last four months.

*Read at June meeting of the Kentucky State Medical Society.

CASE I. C. W., aged twelve years, was brought to my house on Sunday, May 17th, suffering from an intense earache. His countenance was anxious. He had had no sleep for four days and nights. His temperature, 103.25° . The pain was unbearable, and the ear exceedingly sensitive to the touch. The pharynx was quite red and the drum membrane greatly injected, so much so as to render indistinguishable every landmark of the normal drum, such as the long and short processes, the light spot, etc.

I ordered a brisk purge of calomel and soda to be given at once, and a gargle of potassium chlorate to be used during the waking hours. Hot injections were to be applied to the ear after the following manner: A fountain syringe was to be filled with hot water and hung at a point two feet above the head. The tip to be used on the end of the tube was the small straight one. This was pushed well into the external auditory canal, the auricle being pulled upward and backward, so as to straighten the canal, and a straight-edged finger-bowl held under the auricle so as to let the water flow into and out of the ear in a steady stream. When such a syringe can not be had it is usually easy to improvise a douche or siphon, or when this can not be done the hot water may be poured into the ear from a spoon, changing it often. An important procedure just here is to leave the ear entirely dry, or else evaporation of the remaining moisture will increase the trouble. By using hot water as above indicated, we secure all the good and none of the ill effects of the poultice.

My little patient reported at my office on the next day. His temperature was then about normal. He had a cheerful look, and told me that he had had a good night's rest, the second application of the hot water relieving all pain. I found the drum membrane still considerably congested, and in consequence ordered that the hot water be continued, the application being made four times a day for four days. At the end of this time I began inflating the middle ear by Gruber's method.

After ten days' treatment the patient was discharged, with hearing about normal.

In infants it is sometimes difficult to make a diagnosis of acute catarrh until nature opens the drum membrane and pus is discovered on the pillow or in the canal. If, however, a child so afflicted be noticed closely, he will be seen to roll his head from side to side, while at the same time he tries to put his hands to the ear. The skin will be dry and the temperature high. If firm pressure be made over the auditory canal, and the infant screams out, or if on blowing the warm breath into the canal, or pouring into it a little warm water, the child shows signs of severe pain, a diagnosis of acute catarrh of the middle ear may be readily made.

CASE II. Willie R., aged nine, came to me with an earache of three days' duration. High temperature, pain in ear, an anxious countenance, and a highly injected drum membrane were the symptoms. Hot water and calomel with soda were advised, as in the previous case, but did not relieve him. Leeches were then applied to the anterior wall of auditory canal, and the little fellow fell asleep while these were on, notwithstanding his great fear of the "worms." After this hot water and inflations of the middle ear were persisted in for a little more than three weeks, with the perfect recovery of the patient.

CASE III. P. F. W., aged forty-five, contracted a severe cold while on a trip to the East. On his arrival home a very high inflammation of the middle ear set in. His symptoms were, high temperature, a dry, furred tongue, and intense pain in ear. This, at the time when I saw him, had kept him rolling and groaning for thirty-six hours. He had an old pharyngitis, with an acute exacerbation. The ear was very sensitive to the touch, and the drum membrane was red and bulging, showing that mucus or muco-pus was confined in the cavity of the middle ear. His physician had treated him by means of opiates internally, and poultices locally. The first indication here is, as in retained pus elsewhere, to evacuate it. A free incision was therefore made through the posterior and inferior segment of the drum membrane, when several drops of muco-pus and blood escaped with almost immediate relief of pain. The hot water was ordered to be used every two hours. In a week the eustachian catheter

was employed, and active treatment directed to the throat. This was continued for eight weeks, when the patient was discharged, with the hearing three quarters of perfect.

CASE IV. E. B. T., aged twenty-five, presented about the same symptoms as those of case three, except that they had existed longer (seventy-two hours), and the ear had been poulticed for fifty hours. I found the drum membrane bulging, and having a pultaceous look, as if it were about to break down. I made a free incision into it, the knife feeling as if it were passing through sponge cake. Notwithstanding the fact that hot water and leeches were freely employed, the whole drum membrane sloughed. This may be accounted for by the long continuance of the inflammation and the injudicious use of poultices. This patient, after seven months of treatment, was discharged with the hearing but one fourth of perfect. He has but a mere rim of membrane left, which, of course, exposes the delicate mucous membrane of the middle-ear cavity to the irritating effects of the atmosphere, dust, etc.

I believe that if all cases of acute catarrh of the middle ear could be brought under proper treatment during the earlier stages of the disease no chapter need be written on chronic suppuration of the middle ear. Could we get hold of them in time ninety or perhaps ninety-five per cent of them would end as cases one, two, and three. If the *earaches* of childhood were promptly and properly attended to, hopeless cases of chronic non-suppurative inflammation of the middle ear would be far less frequent. That acute catarrh of the middle ear is extremely rare as compared with chronic inflammation is a statement which has the warrant of abundant observation.

Patients one and two illustrate the results of proper treatment in a large majority of such cases. Numbers three and four give the best results obtainable in cases which have been seriously mismanaged at the beginning. I could give many instances in which far worse results were observed.

In cases seen before suppuration is established I place at the head of all treatment, leeches; they should be applied to the

anterior wall of the auditory canal at its entrance, after passing a piece of cotton well into the canal to protect the deeper parts. After leeches, hot water by means of the douche is important. Next, inflation of the middle ear by Gruber's method ; and lastly, opiates. Opium not only relieves pain in this affection, but is substantially curative.

In acute suppuration of the middle ear the first indication is to evacuate the fluid, after which the case can be managed as one of simple acute catarrh until all acute symptoms are relieved. The objection to opium when there is fluid in the middle ear is, that by relieving the pain it annuls one of the symptoms upon which we most depend for our knowledge of existing pathological processes. Should the treatment above given not stop the suppuration astringents and antiseptics are called for, and whether we use one or another of the many drugs which represent these classes, two indications must be fulfilled—cleanliness and dryness. The recently advocated dry treatment, by zinc oxide, calomel, and boracic acid, acts nicely, and though I commonly employ this, I occasionally meet with cases which yield more readily to the sulpho carbolate of zinc or nitrate of silver.

Frequent syringing after all acute inflammation has subsided should be avoided. I do not now depend so much upon the absorbent cotton as a cleanser as was my wont when the dry treatment was first made known, because there is reason to believe that there is no means of cleansing so effective as the syringe. I recognize the damage arising from the use of the water, but this may be overcome by means of a few drops of alcohol (seventy-five per cent) dropped into the canal after it has been well wiped out with the absorbent cotton.

I can not close this report without warning you against the use of poultices in all such cases as I have here described. If I can persuade the general practitioners present to substitute for poultices hot water and leeches in the treatment of acute catarrh and suppuration of the middle ear, I shall feel that I have done a good work for suffering humanity.

LOUISVILLE, KY.

THE TREATMENT OF PSEUDO-MEMBRANOUS INFLAM-
MATION OF THE UPPER AIR-PASSAGES BY
LARGE DOSES OF MERCURY.*

BY O. T. SCHULTZ, M. D.

The plan of treating pseudo-membranous inflammation of the upper air-passages by large doses of mercury, although it has gained many advocates of late, is far from being an established practice. Even among the followers of Reiter's method differences of opinion prevail as to when, during the course of the inflammatory process, the greatest benefits are to be derived from the mercurial plan of treatment; as to the preparation of mercury to be employed; as to the manner in which it should be administered; and as to how long the treatment is to be continued.

But at a time when opinions are still forming on certain unsettled questions, observations—facts—tending to their better understanding must be welcome to every one interested in the solution of these problems, and should hence be made as public as possible. This consideration leads me to report, and somewhat minutely, the following two cases, one of pharyngeal diphtheria, the other of true croup, treated exclusively according to Reiter's method. Large doses of calomel were dropped dry on the tongue at short intervals, and continued until the danger was over. I may hope to be the more readily pardoned for in this wise occupying the time of the readers of the *AMERICAN PRACTITIONER*, since the latter case starts a question in connection with this plan of treatment to which, to my knowledge, attention has as yet not been called.

CASE I. *Pharyngeal Diphtheric Intercurrent Croupous Pneumonia*. Mamie, a scrofulous, well-developed child, aged three and a quarter years, was taken, on the evening of March 18th, in an open wagon four miles against a stiff, cold wind. She

*Read before the Posey County (Ind.) Medical Society.

slept badly during the night and toward morning became feverish, complained of pain in the left side, and was greatly troubled by a dry cough.

March 19th, 8 A. M. I found her with a flushed face, feverish, surface moist, pulse rapid, hard, respiration jerking, not very frequent, the cough frequent and moderately loose. There is increase of fremitus over the whole of the left lung, no râles any where, diminished vesicular murmur. All the movements of respiration and the sounds accompanying the act are very much feebler than on the right side, and percussion on the whole of the left chest gives a sound intermediate between the clear note of healthy lung tissue and the dullness of pneumonia; on the right there is tympanitic resonance. Ordered calomel, gr. ij, extr. belladonna, fl. gtt. 1-6, every second hour.

March 20th. Report comes that the child is lying in a high continued fever, with pain unabated, cough not very troublesome. Fluid extract aconite, gtt. 1-2 every hour, was ordered.

March 21st, 8 A. M. Temperature 102.5°, pulse 140, respiration 40. Dullness, fremitus crepitation, and a few large râles in lower left lung. Right lung and upper left clear. Sordes on teeth. Offensive breath, which parents state has been present for a week. The glands at the angles of the jaws are swelled. A superficial, grayish ulcer has formed on the middle of the upper lip. Child is bright, takes nourishment well, face is flushed; it does not look very ill. Hydrarg. iodid. flav. with ipecac was ordered in alternation with aconite.

March 22d. Pulse 144, respiration 48; cough easy, free, sputa at times bloody; they were not preserved for inspection. Occasional ronchi in left lung; crepitus well marked over whole of left lower lobe. The child is pale, flushes up at times, the face is somewhat puffed. It is remarkably weak, lies in apathy, only occasionally rousing up and crying out. Sordes and fetor have increased. Hydrarg. iodid. flav. with ipecac continued.

March 23d. Report comes that the child has been very restless and delirious all night; that it has frequently complained of pain in the mouth. The child swallows well. The cough

is loose, not troublesome, sputa at times bloody. Medication continued.

March 24th. Temperature 102.5° , pulse 160, very weak, respiration 40. Great delirium during night; toward morning became calm and even showed some disposition to play. At 8 A. M. soporous; when aroused looks up sleepily, and again turns off into a dose. Face pale, dirty white, greatly puffed up, glands at angles of jaws more swelled; tumefaction hard, tender, and extends clear around throat. She swallows without complaint what little food or drink she can be gotten to take. She occasionally rouses up from sleep, cries, and claws at mouth or throat. A sickening odor emanates from patient, musty or moldy in character, and its breath is unbearably offensive. An examination of the mouth and throat, which had been a number of times attempted and on account of the intractable and obstinate character of the child had always been given up, was now made. A shallow, grayish ulcer is found on the middle of the upper lip the size of a butter-bean; the gums are spongy and bleeding, the teeth are hidden under a black crust, the tongue is moist but heavily coated, the velum palati and the tonsils are swollen; a thick gray membrane covers the parts, giving an appearance as though thick, wet blotting paper had been molded to the half arches, uvula and tonsils as far as these were visible. The palatine mucous membrane is reddened, and passes abruptly into the grayish mass. While the examination is going on amid violent struggling of the child, it coughs, and the abundant secretion is seen to be free from blood as it wells up in the throat, and to become mixed with blood only in the buccal cavity. The pneumonic symptoms point to beginning resolution, abundant subcrepitant and larger moist râles being present in the affected lobe, no signs of edema or bronchial crowding in the sound parts of the lungs. Close questioning as to the health of the child immediately previous to the pneumonic attack now yields the following: The child was taken sick with pneumonia the morning of the 19th. On the night of the 14th-

15th, it had high fever, and complained of pain in its throat. The fever continued quite high the whole of the 15th, and then abated. As the other children had also been feverish and had been complaining with their throats for several days no further attention was given. Yet it was noticed that the little girl remained pale, out of sorts, occasionally had pain in throat, had snatches of fever, was without appetite, and had a very offensive breath, until the pneumonia set in and obscured the other symptoms. The course of the pneumonia after the second day, as far as the constitutional symptoms were concerned, differed radically from the usual course of a mild inflammation of the lung. The fever was passive, asthenic. With a temperature of only 102.5° , there was great mental hebetude, bordering toward the last on stupor, and nocturnal delirium. Prostration soon became extreme. Sordes collected on the teeth, and an ugly ulcer formed on the lip from the first. The pale, bloated face, the swollen neck, the fetor of the child's breath, and the offensive exhalations of its body had nothing in common with pneumonia. The pulse was abnormally rapid, increased in frequency and emptiness rapidly after the third day of the pneumonia, and was entirely out of proportion with the temperature and respiration viewed from the stand-point of a pulmonic fever. The examination of the child's throat revealed the cause of all these abnormal symptoms. Ordered hydrarg. bichlorid. gr. i-60, dry on tongue, every two hours.

March 25th. Report comes that membrane is unchanged, breath continues offensive; child cries with pain in mouth at times, but usually lies quiet and sleeps. Cough keeps loose, bowels moved twice. Ordered calomel gr. v, every two hours, rubbed up with milk sugar, placed dry in mouth, to be swallowed dry, and to be followed by water only after several attempts at swallowing had been made.

March 26th. Temperature 100° , pulse 140, respiration 40. Child very soporous; can be kept awake but a short time. Suddenly while asleep cries out as if in pain, and brings hand to mouth. General condition as on 24th. Had four green

passages without bellyache; no vomiting. Took powders as directed moderately well. The inflamed part of the left lung in stage of resolution, loose râles are present; some rhonchi in left and occasionally in right lung; no sign of edema. The throat is red, raw, no vestige of membrane, looks worm-eaten. Breath is less offensive. Sordes; ulcer on lip. I applied to the throat a twenty-five-per-cent solution of chlor. hydrate, and gave calomel, gr. v, every three hours.

March 27th. Temperature 101°, pulse 140, respiration 40. Slept well last night; no delirium, no crying spells. Eats with more appetite. Is livelier and takes notice of its surroundings. Throat raw, no trace of membrane; not much fetor; lung less loose, dullness still complete in lower left lung, being the eighth day of the pneumonia. The impression conveyed by the examination is that during the last three days no progress at all has been made in the inflamed lung toward resolution. The medicine has been well taken, has caused no vomiting, no abdominal pain, no tenesmus, and there has been one grass-green passage, large, at least one pint, and like thin mucilage in consistency. The teeth are cleaning, the labial ulcer is rapidly healing. Ordered oil and turpentine as a purge; made application to throat as above; hydrarg. iodid. flav. and ipecac. every two hours.

March 29th. Temperature 99°, pulse soft, small, 120, respiration 40. Sleeps well at night, looks around brightly, and is somewhat inclined to play; keeps awake for several hours, and then falls into a sound, healthy sleep. No fetor, no appetite, tongue coated. Examination of throat not insisted on. Small râles; left lung loose, with occasional rhonchus. Far less dullness; fremitus less marked. Bowels moved twice in response to the dose of oil on 27th: green water with curdles of milk. Very extensive hardening at angles of jaws, painful to the touch. Locally to throat, turpentine and grease; internally, potass. iodid. gr. ij, every four hours.

April 1st. Child is reported doing well in all respects. Continued the iodide. Convalescence was slow but uninterrupted; it was a month before the child had recovered its former vigor.

Remarks. I think I am justified in drawing several really interesting and important conclusions from the clinical history of this case:

1. The child was taking *mercury* in some form from the 19th to the 25th of March. On the first day, six two-grain doses of calomel with extract of belladonna for the purpose of clearing out the gastro-intestinal tract; then, for seventy-two hours, two hourly doses of iodide of mercury, gr. 1-32, with ipecacuanha, for the pneumonia; then, for twenty-four hours, two hourly doses of the bichloride, 1-60 grain, rubbed up with milk sugar, dry on tongue, for the diphtheria, I selecting this form of mercury because I was afraid that what little vital force the child had left would be overwhelmed by excessive doses of calomel. During three days, and while the system was under the influence of the mercury sufficiently to induce at least two discharges per diem of a nature such as we are taught to ascribe to the effects of this drug, the local process remained unchanged, blood poisoning was steadily progressing, and ultimately attained very alarming proportions. Clinical experience, possessing in this case almost the character of exact experimental investigation, would seem to compel the conclusion that *mercury in small doses is not a specific for diphtheria.*

2. As soon as calomel, in five-grain doses every second hour, rubbed up with milk sugar, placed dry on the tongue and followed by water only after several attempts at swallowing had been made, was resorted to the membrane disappeared and the parts previously covered with it were seen to be red, raw, and worm-eaten. The calomel treatment was begun on the sixth day of the pneumonia, and presumably on the tenth day of the diphtheria. As soon as the membrane had disappeared from the fauces the septic symptoms rapidly wore off, and were far less at the end of the second day of the treatment, though at this time the fever was higher than just after the membrane had separated. Calomel here undoubtedly played the part of *Deus ex machina*, but whether its beneficial

action should be attributed to the *mechanical action* of the large dry powder by which the membrane was *worn off*, or to its *local action* on the diseased parts, or to some occult *specific action* I must leave undetermined. The rapidity with which the labial ulcer healed under the calomel treatment, for in the attempt at giving the medicine it was necessarily dusted over with the powder, might induce one to attribute this result to *the local action of the drug, or perhaps for the fauces to the local and mechanical action combined.*

3. This case shows how upon a latent diphtheria a croupous pneumonia may supervene; how, under the impetus of the circulatory excitement and depressive influence of the pneumonic fever, the original disease may be fanned into dangerous activity, obscure during its height the intercurrent disease, and, after the local process has been brought to an end, the system may throw off the septic matter that has been absorbed from the local lesion, and how the intercurrent pneumonia came to a separate and happy termination—much later, however, than is usual with pneumonias of such a mild type, since in this child resolution was not fully established although fairly under way on the twelfth day.

4. As to the causation of the pneumonia in this child, we have well-nigh positive proof that exposure to cold, especially to sharp winds, will bring on croupous pneumonia, especially if the powers of resistance are from any cause not fully up to health. This little girl was taken on a very cold, windy, March evening, between 5 and 7 o'clock, a distance of four miles in a hard, jolting, springless, farm-wagon. She took sick with fever and had increased cough with pain in the side during the night. On the next morning the lungs showed all signs of incipient hepatization, and at the next examination had developed an unequivocal lobar pneumonia, which, as to local symptoms and manner of resolution, ran the typical course.

CASE II. *Primary Laryngeal Diphtheria—True Croup.* Carrie, aged fifteen months, has been very healthy, has never suffered with catarrhal or other form of disease of the respiratory

organs. On May 3d, a very cool and windy day, she was taken to a country funeral. On the night following she was feverish and restless. On the 4th there was higher fever, and in the afternoon she became hoarse, and had a croupy cough. All these symptoms increased by 9 P. M., when dyspneic attacks began.

May 5th, 5 A. M. High fever, carpo-pedal contractions, face bluish red, respiration 60, marked stridor on inspiration, clear and free expiration; pulse hard, full, 160. The child jumps up in sleep frequently, cries out, and gasps for breath; these seizures are over in a few minutes, and she falls asleep again; there are no lasting dyspneic attacks. When she cries, she loses breath. Voice bleating, without timbre, flat; at times sound is not hoarse but dead. Cough rare, barking. Has been freely vomited with alum and honey and purged with castor-oil. Is very drowsy. Calomel, gr. v, aconite gtt. 1-12, rubbed up with sugar of milk, dry on tongue, every hour. At 7 A. M. seemingly easier inspirations, a softer sound being heard than the previous harsh, dry tone. Less vascular excitement.

Report comes at 5 P. M. that respiration is seemingly easier, the hoarseness is unchanged; has slept well; no starting and trying to get breath; has vomited twice, grayish mucus; has had two green passages. Calomel gr. v, and aconite gtt. 1-12, every two hours were ordered.

May 6th. Child rested moderately well last night. At 3 A. M. became choked up with loud rattling mucus, and it seemed for a while as if she would strangle to death. At 8 A. M. is quite weak; bowels have moved three times during night, green motions; it has vomited twice, once very tough mucus. At time of visit it vomited, on taking powder, greenish water and a lump of tough mucus stained yellow. Pulse 120°, respiration 48, skin cool, face pale, no cyanosis. Cough very loose, child seems to bring up a mouthful of phlegm without much effort; cough usually hoarse, rarely clear, voice almost gone; cries hoarsely, almost without any voice. Child at times looks around as though it would play, but again

quickly lapses into apathy, lying with half-closed eyes, the eye-balls turned up. When it is quiet respiration is easy, the inspiratory sound being much harsher than the expiratory, which is normal. When excited, or when it cries or coughs, it loses its breath and begins to gasp and beat the air with its hands, then falls back completely exhausted, pale, and bathed in sweat. The child is much weaker than it was yesterday, but when it is aroused is brighter. The laryngeal exudation is certainly looser; the cough is less, dry, and hoarse; the voice is unchanged. Calomel, gr. v, every two hours.

At 6 P. M. report comes that child begins to take nourishment, that it is more bright; it had one gray stool and one vomit; the cough is looser. Calomel, gr. v, continued every two hours.

May 7th. Child slept well till past midnight, then was restless for several hours, but again fell asleep and slept till several hours after daybreak. No more powders were given after 3 A. M., the child fighting against them. Altogether it had taken to that hour thirty five-grain doses of calomel, or two drams and a half in all. Patient has vomited twice, once in my presence, after drinking too freely of water; before it vomited it was very restless and evidently very sick at stomach. A large quantity of water with a few flakes of mucus was ejected. One green, slimy stool, with some curdles of milk had been passed. The little one is very weak, can scarcely hold up its head. Respiration is easy, composed of noiseless inspiration and noiseless expiration of normal length. When the child lies quiet or sleeps, its noiseless, easy inspirations stand in remarkable contrast to the loose, rustling, and lengthened inspiratory sound of yesterday, and the dry, harsh, long-drawn sawing of the day before. The cough is more frequent, loose, of considerable force, not barking but of the character of catarrhal cough. The voice is still flat, the cry bleating; it plainly dislikes crying, as if the exertion were painful. At rare intervals an almost natural sound of voice is heard. The respiration is 32, the pulse 14, the skin is pale but of a normal tinge. The tongue is clear, the palate and tonsils slightly

reddened and swollen. A red, pimply eruption appeared yesterday and became very extensive, but has again disappeared with the exception of a few pimples. The mother states that the baby has an eruption of this character with every little gastric or other trouble. Ordered hydrarg. bichlorid., gr. 1-100, every two hours.

May 8th. Report comes that child has slept well all night, and could only be aroused with difficulty. This morning it is bright, pert, and playful; the cough is loose, like catarrhal cough in tone; the voice is far less hoarse. No signs of dyspnea, the respiratory act being easy and natural; occasionally a mucous rattle is heard. Hydrarg. bichlorid., 1-100, and ipecac., gr. 1-24, every two hours for twenty-four hours were ordered.

May 13th. Child is brought to my office. She is pale and weak, but walks about and plays. The voice is weak and gives out under excitement; it cries and talks with some tone, but has no voice at all when it cries hard. She has had, since the 11th, frequent green, slimy, blood-speckled passages. The medicine of the 8th has been only partly and irregularly given. The passages continued green but not frequent until the morning of the 11th, when, after a brown passage, one yellow one and then a large number of green operations followed. Yesterday she had six stools; to-day also a large number. The evacuations are green, slimy, and contain more or less blood; they are preceded by griping and are attended with a considerable degree of straining. On the 11th and 12th the child had been dull and feverish from morning until 4 P. M., when she livened up. To-day she has not been feverish. The tongue is coated. Palpation of abdomen yields negative results. Bismuth subn., gr. v, in emuls. every four hours, was prescribed.

June 3d. The bowel trouble disappeared soon after beginning the emulsion, and now the appetite is good, the passages are natural, but there is left a moderate degree of tympany. The voice still is feeble and cracks under excitement.

Remarks. 1. This case illustrates the favorable course true croup may take under the calomel treatment. In this case

calomel in large doses was the only remedial measure resorted to, except that while the fever was high one twelfth drop of the fluid extract of aconite root was combined with the calomel. The effect of this combination proved very happy, the febrile movement being greatly diminished after a few hours. Has mercury in excessive doses a *general specific* action on the diseased process? I would remark that a *local* action is not excluded in these cases, for *I have positively observed that on two or three occasions some of the powder was inhaled into the larynx.*

2. Four days after the cessation of the calomel treatment and three days after all medicines had been stopped, and while the child was having two or three greenish passages a day, a mild dysenteric attack set in with febrile movement. These symptoms tally with the mildest type of sublimate intoxication reported by Schede, Thorn, and other European observers as resulting from sublimate dressings, injections, etc., in surgical, gynecological, and obstetric practice, and with the symptoms observed after the exhibition of large doses of corrosive sublimate in diphtheria. The dysenteric symptoms were mild in my case, and yielded promptly to treatment.

3. The occurrence of these symptoms of mercurial intoxication might possibly be averted by free purgation with oil and turpentine for several days after the calomel treatment has been suspended, or until the stools lose their green color. This course was followed out in the first case cited above. Or, since these heavy doses of calomel do not in themselves seem to give rise to active purgation, it might be well to administer a daily dose of the laxative while yet the mercurial course is being carried on, so as to prevent an accumulation of the mineral in *prima viæ*. Even if these symptoms be due to absorption of the metal and its specific action on the gut, as is unquestionably the case in *sublimate* poisoning, the use of a purgative in connection with the calomel treatment would seem advisable, as the chances for absorption would be greatly lessened by a rapid elimination of the drug from the body.

FRACTURE OF THE NECK OF THE THIGH-BONE.*

BY P. S. CONNER, M. D.

Professor of Anatomy and Clinical Surgery, Medical College of Ohio, etc.

The frequency of its occurrence, the gravity of its often arising complications, and the rarity of its satisfactory repair gives never failing interest to the consideration of fracture of the neck of the thigh-bone.

Occasionally met with in middle life, possible even in childhood, it is one of the common accidents of old age. For this there is good anatomical reason in the increased brittleness of the bone; dependent, not as was long held upon an altered proportion of animal and inorganic matter, but upon senile rarefaction. As the active period of life passes away, the cortical compact layer of the neck becomes thinner, its trabeculæ (that like pointed arches so marvelously support weight and transmit shock) more and more disappear, and the interseptal spaces correspondingly increase. The neck settles down, and its angle with the shaft diminishes—more in women than in men, and hence the greater frequency of the accident in aged females. Very possibly the ligaments of the hip actually, as well as relatively, increase in firmness, and the bone yields rather than its fibrous investments, fracture takes place, not dislocation. Muscular atrophy, by removing one of the protective forces, contributes its share to putting the parts in condition to be injuriously acted upon.

Where may the break occur? Any where between the head and the inter-trochanteric lines; the degree of obliquity of the fracture depending in part upon the structure of the neck, but in great measure upon the direction of the breaking force, usually a blow upon the region of the great trochanter or the thigh just below.

The literature of the profession is full of discussions, at times acrimonious, upon the subject of intra- and extra-capsular fractures; their relative frequency, their differential diagnosis, their

*Read before the Kentucky State Medical Society at Crab Orchard.

appropriate methods of treatment, and their resulting repair. But practically all this is of little or no value. It is impossible in any given case to determine, except by post-mortem examination, whether the fracture lies wholly within or partly without the capsule; for only upon inspection of the joint can it be known just where the capsule posteriorly blends with the synovial membrane. Anteriorly it normally comes down to the intertrochanteric line, but upon the posterior surface it may stop well up toward the head or approach quite closely the line joining the trochanters. In other words, all neck fractures are intra-capsular in front, but behind some are and some are not; and I know of no way in which during life the one class can be absolutely diagnosticated from the other. Just here lies the little or no value of all specimens of assumed bony union which are unaccompanied with their capsular ligaments left *in situ*. The wise course therefore, it seems to me, is to stop with the determination of the existence of a neck-fracture; and to treat all cases as if complete repair by bone might naturally and properly be expected, and in such way as to secure the desired result with least discomfort and risk to the patient.

As we all know, the cardinal principles in the treatment of any fracture are to place the fragments in apposition and to keep them there; and the careful, faithful attention to these principles in the great majority of cases results in satisfactory union without regard to the age of the patient or to the bone broken. Why, then, is this neck-fracture so generally recovered from with a fibrous union, shorter or longer; and at times followed by entire want of repair? Because (it is commonly held) of the very limited blood-supply to the upper fragment, the comparatively small area of the surfaces of the break, and of the constant presence of synovial fluid bathing the ends of the fragments. But if the amount of blood carried to the head and neck is sufficient for growth and maintenance in a state of health, it surely ought to be enough for repair; even if there is no increased afflux to the damaged part because of existing irritation and inflammation, as there must of necessity be.

In all other parts of the skeleton the mere superficies of the fracture surface does not make for or against proper consolidation; and, besides, the area in the fracture under consideration is not so very small. In fractures involving other joints, though synovial fluid in excess is present, still firm union takes place. Even if the alleged causes of failure are operative, they can be so only to a limited extent, and they must be regarded as very largely insufficient to produce the result which is generally effected. What then is it that, either alone or in connection with defective nutrition and excessive secretion, causes the ordinary imperfect repair of neck fractures? To what is due ligamentous union or non-union in fractures of other long bones? Chiefly, usually wholly, want of proper apposition of the fragments and failure to keep them quiet—one or both. Why is not the same thing true when it is the cervix femoris that is broken? Let impaction occur at the time of the accident, and let it not be broken up by injudicious manipulation or by inflammatory softening, and repair takes place readily enough, and the patient ultimately has a useful limb; more or less shortened, more or less everted, but nevertheless a good limb upon which to stand and with which to walk. Why? Not because more blood is carried to the parts, not because the synovial fluid is kept out from between the pieces, but because these latter are held in firm apposition. Experimentally pin the two fragments together, as Senn did, and complete repair will follow. In the unimpacted cases treated with a long splint, muscular action is constantly tilting or sliding the fragments; the weight of the body resting upon an ordinary bed is crowding the pelvis and with it the upper fragment down upon the thigh; and every time the patient is moved or raised even, as in sliding under a bed-pan, displacement to a greater or less extent is made at the seat of injury. Is it any wonder that imperfect union is the result?

At the present day the weight and extension treatment or the immovable dressing is much more generally adopted than the time-honored long splint; which, as we have already seen, fails in great measure of securing such fixed apposition of the fragments

as is a necessary prerequisite to proper repair. The weight and extension dressing, which answers so well in fractures of the shaft, when applied to those of the neck proves defective in so far as it permits of considerable movement at the seat of injury, does not control the outward displacement of the upper end of the lower fragment, and fails in the very essential requisite of any suitable fracture dressing that it shall altogether prevent or reduce to a minimum movement of the joints immediately above and below the line of break. And, further, it does not and can not keep the fragments in fixed relation to each other when movements of the trunk or limb are made; so that if changes of position of the body are effected, as they must and will be, more or less disturbance of the fragments must result.

The immovable dressing, to fully satisfy the requirements of the case, must embrace not only the the thigh, but the pelvis, or at least the half of it; in order that the hip-joint may be fixed, and the action of the hip-muscles restrained as far as possible. And just here lies the difficulty in the application of such dressings, and the imperfection of it as generally seen. From below the level of the great trochanter the plaster-of-paris bandage (and this is of course, for many reasons, the best of the immovable dressings) can be easily put on; care being taken to properly cut it out and protect it on the inner side so that no undue pressure shall be made upon the region of the genito-crural furrow, and that urine-soiling shall not occur. But to carry it up to and over the iliac crest and inward to the ischial tuberosity—in other words, to apply it over the whole gluteal region, and hold it there, requires an additional girdling of the upper part of the opposite half of the pelvis or the carrying of the supporting dressing obliquely around the body across the opposite lumbar region. Unless this is done, no matter how closely applied at first, in a few hours, or at most days, the dressing will be found to have sprung off, and to be no longer exerting due pressure upon the hip muscles; as the result of which the motion of the joint will be little or not at all controlled, probably no more so than if the bandage had only been carried up over the trochan-

ter major. Even if the immovable dressing has been properly applied and well maintained in position, there is always a chance that in consequence of wasting of the limb sufficient loosening may take place to permit of some displacement of the fragments; to prevent which the weight and extension treatment may be very profitably combined with the fixed dressing.

Applied early, the immovable dressing saves the patient much suffering, and permits with safety, so far as the fracture is concerned, of such changes of position as will not only greatly add to comfort, but materially lessen the chances of the development of that hypostatic pneumonia which is so often the direct cause of death.

The more experience I have had of this method of treating neck fractures the more convinced I have become that by careful application of it we can secure better results with less trouble to our patients and to ourselves than in any other way; and I feel confident that in a large proportion of cases recovery will take place with a limb of good functional value.

Perhaps in the future it will be clearly shown that the rare occurrence of bony union in the past has been simply because the fragments of the broken femoral neck have not been kept steadily in apposition, but have, by the permitted motion of the hip-joint and the unrestrained muscular action upon the shaft, been allowed to so separate and play upon each other as that only an imperfect ligamentous repair has been possible.

CINCINNATI, OHIO.

Reviews.

Selected Monographs: comprising Albuminuria in Health and Disease, by Dr. H. SENATOR; Some Considerations on the Nature and Pathology of Typhus and Typhoid Fever, by the late ALEXANDER P. STEWART, M. D.; Movable Kidney in Women, by Dr. LEOPOLD LANDAU. Pages 370. London: The New Sydenham Society. 1884.

Dr. Senator's contribution to this volume of the New Sydenham Society's publications consists of three articles, a treatise on Albuminuria in Health and Disease, and two appendices, the first a contribution to the theory of urinary secretions and the second the hygienic treatment of albuminuria, the whole translated from the German by Dr. T. P. Smith. The author's complimentary dedication to Prof. Virchow is dated Berlin, October, 1881. The matter of the treatise is therefore fresh, and embodies the mature fruit of the distinguished author's erudition and carefully acquired experience.

The harmony of sequence will be better attained by first noticing the author's views of the theory of urinary secretion, as presented in the second article, which is introduced in these words: "It is well known that there are, at the present time, two opposite theories on the subject of the secretion of urine; one of these may be described as the filtration theory, the other as the secretion theory."

Without attempting to follow the author in his lucid delineation of the lumps of truth and the grains of error in each of these theories, the conclusion at which he logically arrives may be comprehensively stated in his own language, viz., "I consider myself justified in concluding that there are no reasons whatever for relinquishing the theory that a transudation alone escapes from the glomerular vessels of the kidneys, in accordance with the laws of filtration. Secondly, that a secretion of the specific constituents of urine in a watery (concentrated) solution

takes place in the convoluted uriniferous tubules, and it therefore follows that perfect urine represents a mixture of a transuded with a secreted solution." And Dr. Senator's position will be fairly presented if to this quotation there be added the statement that he holds that the filtrate that has traversed the tufts of the glomeruli contains all the ingredients of the blood that can physiologically pass through membranes, inclusive of the sundry salts and albumen, thus making the presence of albumen in physiological urine a postulate.

Dr. Senator's treatise on albuminuria consists of an introduction and six sections, and is thorough and exhaustive. As shown above, albumen in urine is not necessarily a pathological product, and it is only when the quantity is augmented through some structural change in the kidneys, or because of an altered blood pressure or a deterioration in the blood itself, that it can be claimed as the result of disease.

An important position of the author is that there are several kinds of albumen in pathological urine, and the presence of only a part of them can be detected by the ordinary tests of heat and nitric acid, which renders the diagnosis of some of the forms of albuminuria an affair of difficulty. He points out that serum, albumen, and globulin are derived directly from the blood, and peptone and pro-peptone possibly from the blood as well as from certain degenerative changes in the glandular and epithelial cells of the kidneys and in other tissues. And he indicates other forms of albuminoid substances that sometimes appear as morbid products in urine, the real nature and source of which are still obscure.

A careful study of this admirable treatise will disclose how much important scientific information touching albuminuria there is, not yet incorporated into our text-books nor embraced in special works on urinary diseases.

Dr. Senator's third paper is on the hygienic treatment of albuminuria, and he establishes the importance of this theme by saying: "As regards the therapeutics of albuminuria, every unprejudiced physician will confess that up to the present time

we have not, on the whole, been very successful with our purely medicinal treatment. This is the reason why new remedies are continually being recommended. They are, however, as little efficacious as the old ones." Diet is of the first importance, and the rule of eating he advises is, eat enough, but in small quantities frequently repeated, rather than heavy meals at long intervals. Eggs should be avoided. Partake sparingly of mature meats, but more freely of lamb, veal, and young fowls. Fish are good. Fresh vegetables may be consumed freely, but the leguminous, which contain albumen, are not equal to others. Milk as a beverage is good, but a diet of milk exclusively will not answer, although much talked about. Milk with white bread, or milk-gruel made with flour or oatmeal is equally good. Saline mineral waters, warm or cold according to the peculiarities of the case, are advisable. Light sour wines are allowable, and in some cases beer, but the stronger alcoholic liquors must all be discarded. Proper bathing is commended; rest is enjoined, and a suitable climate is pre-eminently indicated. Egypt—when the war shall be over—is an excellent country for the invalid, but any locality with an equable, warm, dry atmosphere is appropriate.

This is a hasty mention of some of the chief points of the author's scheme of hygiene for the victims of albuminuria, but they are not presented dogmatically by him; on the contrary, in every instance scientific reasons are distinctly and intelligently set forth for the recommendations made.

Dr. Stewart's paper on "The Nature and Pathology of Typhus and Typhoid Fever" is a little over forty-five years old, having been read to the Parisian Medical Society in April, 1840. Any medical man of to-day who was not a practitioner as early as 1850 will not have caught a full view of the warmth of the controversy concerning the identity or non-identity of typhus and typhoid fever that glowed in the medical journals and other professional literature for fifteen years preceding 1850, unless he has been a special student of the effusions of the controversialists of that day discussing these points. The hot contest raged for years.

It is not pretended that Dr. Stewart was the first to make proclamation of the distinctive characters of these diseases. It is admitted that Dr. Gerhard had in 1837 made the American profession acquainted with them in a paper published in the American Journal of the Medical Sciences, but it is claimed, and properly enough, that Dr. Stewart's memoir on the subject, which, although read first in Paris, was published the same year in the Edinburgh Medical and Surgical Journal, was largely influential in establishing correct views in the premises in the professional mind in Great Britain. His investigation had been searching, under ample opportunity and favorable circumstances, and he presented his observations and the conclusions founded thereon in such plain and forcible logic that they have never been invalidated, and it was probably the double incentive of preserving in a permanent and accessible form so valuable a dissertation, and by the same act to testify their appreciation of the character and talents of a recently-deceased member, that induced the New Sydenham Society to make this production a part of one of its publications for 1884.

Dr. Landau's treatise on "**Movable Kidney in Women**" was prepared by the author, who is *privat-docens* in the University of Berlin, in 1881, and the translation was done in 1884 by Francis Henry Champneys, F. R. C. D.

Much labor has been devoted by the author to the anatomy and partial physiology of the kidneys, and also to the history and statistics of movable kidney. Of one hundred cases in which the age of the patient is given, fifteen were between twenty and thirty, forty-three between thirty and forty, and twenty-one between forty and fifty, making seventy-nine per cent between the ages of twenty and fifty. In ninety-seven cases returned by sex, eighty-seven were women and ten were men. In one hundred and seventy-eight cases the right kidney was movable in one hundred and fifty-one, the left in thirteen, and both in fourteen cases.

As illustrating the diversity of opinion in the profession touching the importance of movable kidney, the author quotes

Rosenstein, viz., "Knowledge of the facts in point is more important as a means of avoiding errors in diagnosis than on its own account, since *the affection causes no great inconvenience*, and treatment is powerless to relieve it;" and then quotes Keppler on the other hand, who "regards even uncomplicated movable kidney as a deadly disease, which should be extirpated whenever it gives rise to symptoms."

Two leading indications for relief of this present to the author; the first is reposition of the organ and its maintenance in place, and the second is to extirpate it. To maintain a floating kidney in place there are two methods: one is to bind and pad the abdomen, which is, however, rarely successful, and the other is to sew it fast to the abdominal walls, which should never be tried. Although it is difficult to secure a dislocated kidney *in situ*, much comfort can be secured to the patient by holding it quiet in its abnormal situation by appropriate external dressings to the abdomen. So far as extirpation is concerned, the author reports six cases, three of which were fatal. Fifty per cent is a serious mortality, but the cases are too few to warrant the conclusion that this is the true ratio for extirpation of movable kidney, though it differs but slightly from the statistics of Dr. Gross, who reported to the late meeting of the American Surgical Society in Washington two hundred and eleven nephrectomies for all causes, with a mortality of forty-seven per cent.

Dr. Landau's paper, though evidencing great research, and containing much valuable information, appears to lack something of that fullness, exactness, and clearness that the nature and obscurity of movable kidney demand to be entirely satisfactory to the earnest inquirer. And, further, the translator appears to have been too large or too small for clean work in that situation. He had to indite a preface in which he belittles the literary attainments of his principal, and asserts that the author's quotations are almost invariably incorrect, so that for accuracy he had to go to original sources. And at sundry places, in bracketed marginal notes, the translator has been moved to correct the author in his facts, deductions, and inferences. In

truth, these disagreements are so frequent and so pointed that one is almost forced to the conclusion that the Society would have done better to have omitted the author's paper and invited the translator to prepare one in lieu thereof—that is, if the intimations of the superiority of the translator by the translator be well grounded.

J. F. H.

Modern Therapeutics of the Diseases of Children: with Observations on the Hygiene of Infancy. By JOSEPH F. EDWARDS, M. D., editor of the *Annals of Hygiene*, associate editor of the *Medical and Surgical Reporter*, author of "Bright's Disease and Its Treatment," Fellow of the College of Physicians, of Philadelphia, etc. Pages 346. Philadelphia: D. G. Brinton. 1885.

From an announcement on an advertising page at the end of this volume we are informed that the author edited the eighth edition of "Naphey's Modern Medical Therapeutics," which service doubtlessly furnished him with the principal part of the material for this work, otherwise it would appear improbable that even so industrious a man as Dr. Edwards would expect to find his account for so much labor as would be necessary to prepare the copy for this work if it alone were the only result of all the time and pains bestowed upon it.

Over four hundred writers are quoted, hailing from all parts of the civilized world, and to obtain their views, books, monographs, and periodicals unnumbered must have been consulted. "General Remarks on Therapeutics of Children" is the title of the first article in the book, and thirty pages are devoted to its consideration and the ideas of twenty-seven authors are recited; but a more appropriate name would be "Infantile Medical Salmagundi," for it includes almost every thing of a general character that these twenty-seven authors have written concerning the examination, medication, food and feeding, dress, training, schooling, nervous organization, idiosyncracies, dentition, insanity, and so on, of children, all mixed up in the most admi-

rable confusion, without regard to the order of succession or the association of related topics.

This olio is followed by the consideration of about one hundred special diseases, alphabetically arranged, beginning with anemia and ending with vulvitis. The extent to which each disease is considered appears to have depended somewhat on its importance in the estimation of the author, or on the number of writers treating of it that he met with, or in some instances on a combination of the two inducements. For example, chorea has two pages, two authorities are cited, two formal prescriptions are presented, and eighteen separate drugs referred to; aphthæ has one page, two authorities, one formal prescription, and seventeen special drugs, while cephalhematoma is disposed of in eleven lines, two authorities cited, and three applications recommended. On the other hand, scarlet fever occupies twenty-six pages, sixty-one authors are referred to, and there are given twenty-four formal prescriptions; diarrhea thirty-five pages, forty-nine authors, and fifty-five formal prescriptions, and diphtheria forty-three pages, eighty-three authors, and sixty-eight formal prescriptions, while in each case the special drugs recommended are, like the minor articles at a rural vendue, too numerous to mention. Three hundred and sixty-six formal prescriptions are printed in the volume, each in connection with the disease for which it is intended, and associated with the name of the physician who prepared it.

There are three indices to the volume; one of diseases, a second of remedies, and a third of authors. They are all apparently full, but the last imperfect in that, while professing to refer to the pages where the author's views may be consulted, it does so only to a limited extent. For example, the index refers to the name of Dr. Edward Henoeh as appearing on only nine pages, while in fact he is the favorite author to quote, and his opinions are introduced in all but a minority of the one hundred diseases therapeutically discussed.

The foregoing may perhaps convey some idea of the character, extent, and drift of the book; such is its design, but nothing

short of inspection will enlighten as to the thorough therapeutic jumble to be found in its contents. No principles are laid down to guide the inquirer, but the ideas and opinions of the four hundred writers are introduced—the wise, the learned, and the experienced along with the foolish, the ignorant, and the novice, on a common level, with nothing to distinguish one from another. The methods of two parties quoted in the therapeutics of the same disorder are diametrically opposed, without a syllable of why they differ or which is right. For instance, Dr. K. says every patch of diphtheria in the throat should be painted “with a strong solution of the *nitrate of silver*” in the beginning, while Dr. H. says such applications “must be avoided at any cost.” Such books contain vast stores of material from which the lazy, reckless therapist may draw haphazard, and do good or evil, as chance may have it, but they are not in the interest of scientific medicine, and they *teach* nothing, unless it be the imperfect state of infantile therapeutics in the regular profession, and that children may survive both very serious diseases and very heterogeneous medication.

J. F. H.

Perils of American Women, or a Doctor's Talk with Maiden, Wife, and Mother. By G. L. AUSTIN, M. D., with a Recommendatory Letter from Mrs. Mary A. Livermore. Pages 240. Boston: Lee & Shepard, Publishers. 1883.

The title of this little volume, its handsome make up, gilt-edged, with a lithographic *fac simile* copy of the letter of Mrs. Livermore as a frontispiece, all constitute an *a priori* testimony that the work is an *ad captandum* production, intended, under the semblance of a candid, chaste scientific dissertation on the normal structure and morbid activity of woman's sexual organs, to attract the attention of the more or less cultured youngish prurient persons of both sexes who are under the dominion of

a salacious disposition, and a perusal of its pages by an ordinary professional reader unfortunately affords nothing to amend this first impression.

An examination of the advance sheets of the work by Mrs. Livermore drew from her sentences of warm approval, but then there seems to have been something in its composition that unbalanced her usual womanly equanimity and inspired the penning of this aberratic sentiment, conveyed in somewhat unrefined phrase, viz., "I am especially thankful for Dr. Austin's disparaging words concerning the unclean army of 'gynecologists.' I regard these specialists as a pestiferous set, and the bare mention of them is the same in its effect upon me as a red flag to a bull." It is the lack of a sound, discreet judgment in the bull that allows him to become furious on the flirting of a red flag in his face, and by the same token one draws one's conclusion of the causes of Mrs. L's. ruffled condition on the mere mention of gynecologists—*par nobile fratrum*.

The first chapter of the book presents the anatomy of the female organs of generation in concise, well selected, strictly technical language that none but an anatomist can understand. The illustration has no correspondence with the text, and it would require much previous training for any one to comprehend that it was intended to represent the pelvis of a woman bisected in the median line.

From this the author proceeds to paint in ornate colors the relation between the development of the sexual organs and love, and continues the legend until the ardent passion leads to marriage, the objective goal from the beginning. Then chapter iv opens with this florid rhetoric: "We have now arrived at the bridal night, during which life is only tenderness and infatuation. This new and sudden situation, consecrated to please, to love, to confess it, and to hear it repeated, makes giddy, enchains, transports in spite of one's self. It is a delirium, it is an exaltation which holds one fast in a ravishing madness."

Subsequent chapters treat of labor, prevention of conception, abortion, disorders of menstruation, displacements of the uterus,

nervous prostration and cognate subjects in a manner that may attract, but certainly can not valuably instruct, the class to which it is ostensibly addressed. An appendix of six pages containing twenty-two prescriptions with which the ailing maid, wife, and mother, is to cure herself and keep out of the clutches of the "pestiferous" gynecologists closes the volume. J. F. H.

Berlin as a Medical Center: A Guide for American Practitioners and Students. By HORATIO R. BIGELOW, M. D., etc. Reprinted from the New England Medical Monthly. Sandy Hook, Conn: New England Publishing Company. 1885.

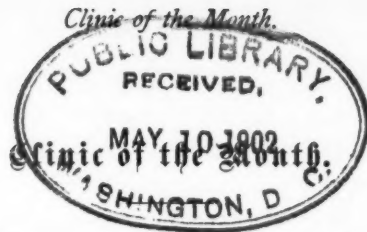
This handsome and handy little volume is the outcome of a series of letters written by the author to the New England Medical Monthly during his stay in Berlin.

As its title implies it is intended as a guide to the American physician who purposes prosecuting his studies in the German capital; and a very valuable and trustworthy guide it undoubtedly will prove to be to the persons for whom it was prepared. It tells how to get to and from Berlin in the cheapest and best way, where to go on arrival, the quarter of the city in which will be found the best hotels, boarding houses, and rooms, the restaurants at which are served the best meals for the least money, the clinics which utilize the largest amount of material, the lectures which are the most attractive, and scores of other things which the visitor can learn from no other source in so convenient a way. But the work has a value quite above and beyond that of a mere guide-book. It contains one or two statements that every one looking forward to a course of study in the great Prussian city should read and ponder well before leaving home. Dr. Bigelow has been over the ground and speaks as one in authority. He says—and it does him honor to say it:

"Although the fact is not admitted here, yet it is a fact never-

theless, that New York as a School of Gynecology is far ahead of Berlin, both in the manner and the matter thereof. Better work, cleaner work, and more conservative work is done at home. A work that is more enduring, since it lives in the freedom from suffering and the happy spirits of the many women whose cases have been *watched* and who have not recklessly been subjected to operative interference. Professors Schröder and Gusserow only have clinics here. In New York alone there are clinics by Emmet, by Barker, by Lusk, by Mundé, by Thomas, by Wylie, by Skene, by Dawson, by Garrigues, by Hunter, and Gillette, all of whom have achieved celebrity from hard, honest work, and faithful study. Emmet and Goodell are very largely quoted here, and Skene's book has received frequent commendation. The "American Journal of Obstetrics" has taken high rank, and its eminent editor is very generally known and respected. No city in the world offers greater advantages of study to the practitioner than New York. There is nothing in Germany similar to our Post-graduate Schools, and only in so far as it may be a part of a liberal education is it necessary for the student of medicine to seek opportunities abroad."

The writer heard one of the most eminent of the Edinburgh faculty say a few years back, "The time has come when we must send our students to America to study gynecology." A short time after a son of the speaker spent a season in New York studying the operative work of its gynecologists. If, however, our countrymen must cross the sea, the little mentor under notice tells him that he has found the bromide potassium to be the only satisfactory medicine in sea-sickness, but that this often fails, while Mellin's Food will often be retained when the stomach rejects every thing else. He also suggests that the traveler take along a supply of seidlitz powders. In our own person the bromide availed not, nor would the seidlitz stay down, but the Mellin's Food was acceptable and useful, while a good article of koumiss was most grateful to the palate and did much to allay nausea.



ON BURIED SUTURES, OR SUTURING SEPARATELY PERIOSTEUM TO PERIOSTEUM, MUSCLE TO MUSCLE, DEEP FASCIA TO DEEP FASCIA, AND SKIN TO SKIN, AFTER DEEP INCISIONS OF ALL KINDS.—C. B. Keetley, F. R. C. S., Senior Surgeon to the West London Hospital, makes the following valuable contribution to the British Medical Journal:

Buried sutures or "sunk sutures," as they have been also called, are such as are completely covered by the skin, and do not involve that structure at all. In the form of sutures uniting the fragments of fractured bones, especially the olecranon and patella, they have long been employed, and also as sutures to unite divided nerves and tendons, as well as wounded veins, intestines, and other hollow structures. But all the above mentioned forms of buried suture differ essentially in their objects from those to which I wish to call attention.

The sutures of which I now wish to speak are employed with intent to influence the whole course and final result of wounds in general. For instance, let us suppose buried sutures of the first kind to have been used to unite the two ends of a divided nerve; the use of the other kind of buried sutures would now commence, and proceed as follows:

Whatever muscles or aponeuroses had been divided in cutting down upon the nerve would be restored to their original relationships, and kept there by aseptic animal sutures, such as carbolyzed gut; then the wound in the deep fascia would be separately sewn up. Finally, the wound in the skin would be closed by either catgut or silver, or whatever might be preferred. What good do we expect to get from this?

1. We need no drainage-tubes. No spaces or pockets are left wherein blood or serum can collect, and therefore it does not collect. I presume that all wounded vessels, of a size such

that the blood-pressure would force blood out of them in spite of the buried sutures, have been carefully secured, and that the wound is thoroughly aseptic.

2. The sutured muscles and aponeuroses are eventually perfectly restored as regards function, as also is the deep fascia. Even the deep fascia has important functions, especially in certain localities, and in connection with the following points:

3. Deep, rough, and depressed cicatrices are avoided.

4. Necrosis of the bone and sloughing of soft tissues are prevented.

This, like other important developments of antiseptic surgery, has attracted most attention in Germany. There it appears to have originated in the practice of Werth, the gynecologist, who praised the sutures highly, as tending to success in operations for ruptured perineum. It is, however, Esmarch's assistant, Neuber (the inventor of decalcified bone drainage-tubes) and Professor Küster, who are the chief apostles and pioneers of this great advance in surgery, for such I esteem it.

Küster read his paper at the last meeting of the Society of German Surgeons. In the discussion which followed, Esmarch having stated that with these sunk sutures drainage-tubes could be altogether dispensed with, he was asked, "What, after excision of the hip?" He thereupon answered, shortly and decisively, "Yes."

Turning to my own experience, I have carefully recorded the details of two amputations of the thigh, and one of the leg, two excisions of the hip, one case of *évidement* of the bones of the knee-joint, one wedge-osteotomy of the hip, one osteotomy of the tibia and fibula, one operation for ununited fracture of the same bones, two suturings of fractured patellæ, one removal of sequestrum in necrosis of the symphysis pubis, with large abscess in the abdominal wall; one operation for congenital contraction of the knee by open antiseptic incision; one incision to examine a chronic swelling of the parotid, one excision of multiple sebaceous glands of the head, and two cases of resection of the quadriceps extensor cruris. In all these seven-

teen cases, except two, the buried sutures have done all which sanguine hopes could expect of them. But, in stating this, I must confess that I have not always dared to dispense with drainage-tubes. I simply thought I ought to feel my way cautiously. Of the two cases which I have mentioned as being exceptions, one was an almost hopeless case of amputation of the thigh in an old lady, over seventy, who suffered from sloughing of almost all the soft parts of one lower extremity, from the knee downward, with burrowing of pus up to the hip, the cause being erysipelas. She died forty-eight hours after the operation. The remaining case possibly casts a slur upon buried sutures, or upon their employment in my hands. A man, aged thirty, with advanced strumous disease of the knee, tuberculous disease of both lungs, and hectic fever, had the knee freely excised, and all the diseased synovial tissues removed with scissors and sharp spoons. The bones were then fixed firmly together with silver sutures, and the wounded soft parts secured with buried sutures. His only hope could lie in speedy osseous union. Unfortunately the edges of the flap sloughed. Thus frequent changes of dressing, with consequent slight disturbances of the ends of the bone, were necessitated. Finally, our efforts to keep the wound aseptic failed, and amputation was performed. I think it possible that my covered sutures had seriously interfered with the imperfect blood-supply in this poor enfeebled creature.

I will describe briefly two or three of the above cases and their results. In amputating the leg, two lateral and very short rounded skin-flaps were made. A very short distance (about half an inch) above the angles of junction of the skin-flaps, the muscles were divided by a circular sweep. The periosteum was divided nearly as low down as the muscles, and turned back up to the level where the bones were divided. The periosteum must be reflected to an eighth of an inch or more beyond the point of division of the bone, and carefully held out of the way, without being stripped further up, while the saw is being used. Next, the vessels are tied until it is time to put in the sutures.

About three or four will draw the periosteum securely over the cut surfaces of each bone, leaving a small opening opposite the medulla. Next, the muscles and aponeuroses of the extensor side are united to those of the flexor side, more or less *en masse*, by five or six sutures of strong catgut. These sutures had better not, as a rule, be made to go quite through to the deep surfaces of these structures, but should be half an inch to one inch from the cut edges of the superficial surface. The bones are thus completely covered. Next, the deep fascia should be separately sutured, and lastly the skin.

Almost the first time I ever tried buried sutures was in an amputation of the leg (middle third) done in February, 1884, in the West London Hospital. The flaps, when thus sewn up, were too tight to allow room for a drainage-tube to be inserted without violence. Therefore none was used, except one of very small size passed through one corner of the skin-incision, but not into the depth of the wound. This case was further complicated by the fact that, owing to an unhealthy condition of the marrow, the medulla of both tibia and fibula was scraped out right up to the upper epiphyses of those bones; and the medullary cavities, thus emptied, were injected with liquor hydrargyri perchloridi (whose strength, it may be remembered, is just over 1 in 1000).

Healing took place throughout by the first intention, except as regards the skin, which gaped a little when its sutures gave way. The patient has long been quite convalescent, and is using an artificial leg.

The large abscess cavity in connection with the necrosed symphysis pubis extended outward as far as the iliac crest and was nearly as wide. It was supposed, when sent to me, to be an inguinal hernia. I slit it up, scraped out its lining thoroughly, and closed it in with sutures which passed from side to side beneath its floor, but not through the skin; it was thus reduced to a long narrow and shallow groove. This I closed with superficial sutures. The deep sutures held on till the depth of the cavity was obliterated by the healing process. At the lowest

angle of the wound a drainage-tube was passed straight down to the small cavity from which the necrosed symphysis had been extracted.

In no cases have I found these sutures more brilliantly successful than in dealing with sebaceous cysts of the head. Having dissected out three from the scalp I obliterated the remaining cavities by two buried sutures in each, passing them well beneath the floor of each small wound. No cutaneous sutures were used at all; the skin-wounds did not gape. Over the wounds was placed a coat of salicylic acid dissolved in ether, as well as a little powdered salicylic acid. No bandages were used. The patient went daily to his work and, a fortnight afterward, washed the salicylic scab, as it might be called, off three sound linear cicatrices. It is important to say that he was not allowed to brush his hair during the treatment; it was kept both tidy and aseptic by occasionally sponging with a wash containing spirit, corrosive sublimate, and rose-water.

In conclusion, I have to say that it is only in strictly antiseptic surgery I would venture to recommend the use of these sutures; but that, in the case of all surgeons who have faith in antiseptic theory and practice, they will find in buried sutures an effective and beautiful addition to their methods.

THE MANAGEMENT OF PLACENTA PREVIA; AN IMPROVED METHOD BY WHICH TO COMPLETE THE FIRST STAGE OF LABOR IN SUCH CASES.—We copy portions of a paper on this subject, by Dr. Malcolm McLean, as it appears in the *Obstetric Gazette*.

The author exhibited some instruments, modifications or mechanical appliances already known, but which so simplified their application that the completion of the first stage of labor may be more promptly, easily, and safely accomplished by their use than by any other means at our command.

The conclusions to which the author of the paper arrived were substantially as follows:

1. In any case of placenta previa avoid the application of chemical styptics.

2. Inasmuch as the dangers from hemorrhage were greater than all else; preparations to induce premature labor should be made.

3. In primiparous cases with rigid tissues, the vagina should be well distended with the colpeurynter or tampon until cervical dilatation had taken place.

4. It was safer to rely upon thorough continuous pressure by Barnes' dilator than upon pressure by the fetal parts.

5. Where the placenta was lateral or partial, and there were no indications for hastening the labor, the method of Braxton Hicks might be practiced, consisting of turning by the bimanual method as soon as possible, pulling down a leg and with it the breech of the child, tamponing the ruptured placental vessels, and then letting the delivery be completed spontaneously, or aided by gentle traction.

6. When the head presented and the os was dilated, or very dilatable, rupture the membranes.

7. Podalic version was to be preferred to the application of forceps within the cervix, especially when the cervix was dry.

8. Complete vaginal tamponing might be applied and left in position in cases in which other means were not at hand.

9. The dangers of septic infection with the proper use of tampons and dilators was so slight that it need not be considered.

10. Wherever possible, delivery should be accomplished deliberately.

11. The greatest care must be exercised not to convey infectious material to the mother's system, which involved the application of the great principle of absolute cleanliness.

The discussion was opened by Dr. W. T. Lusk, who said, notwithstanding his substantial indorsement of the views offered by the reader of the paper, he wished to say a few words with reference to the Braxton Hicks' method advocated so strongly by Lomer. From statistics it appeared that in ninety-three cases in which this method had been adopted there was only a single death—a result which certainly was extraordinary, and so extraordinary that it was worthy of most careful consideration.

Soon after looking over these statistics, Dr. Lusk was called to a case of placenta previa occurring in the practice of Dr. Spaulding of Harlem, and a day was finally appointed for beginning premature labor. On account of delay, over which the consultation had no control, the day for inducing premature labor was postponed, and when finally the day was reached on which it was to be begun, he was summoned before the hour appointed, and on arrival found that the labor had begun spontaneously, and that the os externum was nearly completely dilated, with the internal os dilated to about the size of a silver half-dollar. Dr. Lusk at once prepared the patient, introduced his hand into the vagina, passed two fingers through the cervix, ruptured the membranes, pulled down an extremity, and the version was completed, the whole operation probably occupying not more than two or three minutes. Then the breech was brought down into the cervix. Thus far, the dangers to the mother are almost nothing, and now the question arises concerning the life of the child, can it be saved? Although, of course, this is a secondary consideration, it is desirable to do so, if possible. In order to prevent hemorrhage, he found that it was necessary to make slight traction upon the breech, just sufficient to retain the child in contact with the surface from which the hemorrhage might take place, and in a very short time the child was delivered alive. The patient was a multipara, which favored the accomplishment of labor with a living child, and the manipulations were practiced with comparative ease; doubtless if the patient had been a primipara the difficulties would have been much greater than they were; but the method was eminently satisfactory.

The patient did well until two or three days later, when she died somewhat suddenly from pulmonary embolism, probably due to delay in the induction of premature labor. So far as checking the hemorrhage was concerned, he could not speak of the method in too high terms of commendation. The method of treatment, therefore, of placenta previa, which he felt disposed to recommend, was to tampon the vagina if dilatation

of the cervix has just begun, and as soon as possible introduce a Barnes' dilator into the cervix, and when the cervix is sufficiently dilated to render the extraction of the child a matter of no great danger, proceed to follow it up by the method of Braxton Hicks. He should hesitate very much before adopting the method by rupture of the membranes and trusting to uterine contractions to bring the head.

Dr. Isaac E. Taylor thought that a distinction should be made in the treatment of placenta previa, between the cases of placenta centralis and cases of placenta lateralis, or partial previa. The treatment of partial separation of the placenta is so simple that it required but little consideration.

With regard to placenta centralis early delivery should be effected, for the patient's life was in great jeopardy. This was to be accomplished by dilatation of the neck of the womb and resorting to version, and version could be best accomplished by the bimanual method, that is, by the aid of external manipulations. The dilatation of the cervix might be accomplished by different means. When Barnes' dilators were used, or a vaginal tampon, dilatation or separation of the placenta did not take place at the internal os, but it excited contractions, and the placenta was partially separated when the os was dilated to the size of a two-shilling piece. Nature had then done her work, and the case became one in which only partial separation was to be accomplished.

Out of fourteen cases of placenta centralis which had been under his care, only five deaths had occurred. In most of the cases of placenta centralis the children were lost, but that was a matter of but little moment as compared to the saving of the life of the mother.

Dr. Taylor remarked especially with reference to the situation of the placenta in placenta centralis, and said that he had established by ocular demonstration the fact that the placenta was not attached to any part of the cervical canal.

Dr. W. M. Polk said he thought the point brought out by Dr. Taylor, namely, that of making a distinction between pla-

centa centralis and partial attachment of the placenta, was an important and practical one, as there was a great difference in the management of these two classes of cases. The fact of the placenta being central added very much to the danger, both with reference to the mother and the child.

As far as the general management of these cases was concerned, it was practically that adopted by Dr. Taylor, and Dr. Polk believed that the vaginal tampon was the safest remedy which could be employed. The points suggested by Dr. McLean, that the ablest obstetrician would often find difficulty in introducing Barnes' dilators, was one which most obstetricians were willing at once to grant, and therefore any device which would facilitate the introduction of the dilating bags would be very acceptable. But it seemed to him that the wisest plan to be adopted was the simplest and safest plan for meeting the hemorrhage, and the tampon was probably the best way by which it could be arrested. He would suggest that modification of the tampon by the use of the roller bandage would not fulfill the indications at all. He did not pretend to say that it had not done so in Dr. Taylor's skillful hands, but it must also be said that there were but few who were equally skilled in obstetric manipulations. Dr. Polk recommended thorough tamponing of the vagina, and by balls of cotton tied together kite-tail fashion to facilitate removal, as the best and most effectual method, and also introduced by the aid of Sims' speculum.

With regard to after-treatment, if the method of management advocated by Lomer was adopted, and the child was ignored, the management of these cases was comparatively simple, and certainly the introduction of the hand into the vagina and through the nearly completely dilated cervix gave the accoucheur thorough control of the situation. With perforated membranes, version according to Braxton Hicks' method could be readily performed; then bringing down one leg, allowing the other leg and body to remain in the cavity of the uterus, such pressure was exerted on the lower segment of the uterus as would completely control hemorrhage.

One would think that the child need not suffer materially in these cases, because the hemorrhage is arrested, and the extraction can be accomplished very readily; but the statistics referred to by Dr. Lusk prove conclusively that the mortality to the child is very great.

The use of Barnes' dilator was unquestionably a measure of very great value in the milder cases, where the placenta is attached to the borders of the os, or a small portion overlaps the cervix, so that the hemorrhage will not probably last long; but where we have to deal with central implantation, Dr. Polk preferred to commence and continue with the tampon until the cervix was certainly dilated sufficiently to permit version.

Dr. Polk also sustained Dr. Taylor's opinion, that the placenta is not attached to any part within the cervical canal, and referred to museum specimens which illustrated that point.

Dr. E. L. Partridge wished to commend the rubber bags in the management of placenta previa of both forms, and he also spoke against the use of the tampons, especially with reference to the liability of conveying septic material to the mother, for in very many instances at least the material of which they were composed was such as rendered the liability of the induction of septic infection very great.

He indorsed the view that the little pocket on the side of Barnes' dilator must be abandoned, and regarded Dr. McLean's instrument as a most excellent device for the introduction of the bags. With reference to the liability of hemorrhage to occur during the change of the ordinary Barnes' dilators, the point that had been referred to by Dr. McLean, he believed that it did not constitute a serious objection to the use of Barnes' dilators, for he had used them in four cases of placenta previa, and no hemorrhage had occurred in either of them during the period of the withdrawal of one bag and the insertion of another. The rubber bag goes directly to the source of hemorrhage, and was the most effectual means at our command for controlling this hemorrhage, as had been brought out by the author of the paper, and this pressure should be continued until

the cervix was dilated. According to his experience the further obstetric procedure had been by version, as recommended by the very large majority of obstetricians, and complete version—not the method advocated by Braxton Hicks. Dr. Partridge did not regard placenta previa under ordinary circumstances as a serious complication of labor.

Dr. P. F. Mundé said he had seen twelve cases of placenta previa, four of which were centralis, and the others partial previa. Of these twelve women only two died, and four children were born dead.

Dr. Mundé regarded the three cardinal points in the management of placenta previa to be as follows: first, to arrest hemorrhage; second, dilatation of the cervical canal and also of the soft parts sufficiently to allow easy manipulation, and then, third, rupture of the membranes and speedy extraction of the child, as rapidly as possibly consistent with safety to the soft parts. He had usually employed the colpeurynter to accomplish dilatation, but any instrument which distended the upper part of the vagina was sufficient. If the cervical canal was dilated to the size of a silver half dollar he thought that dilatation could be completed immediately and delivery of the child accomplished at once, better than to turn and block the passages with the child, leaving nature to take care of the case. Although the life of the child was of secondary consideration, yet he thought that complete version and rapid delivery, as indicated, was equally safe for the mother, and that it would increase the chance for saving the life of the child.

Dr. W. E. Forest thought it important to first establish labor pains, and for this purpose the use of the colpeurynter or vaginal tampon was better than the use of Barnes' dilators, for the cervical canal might be thoroughly dilated and yet no uterine contractions take place, and under such circumstances the condition of things was very unpleasant, not to say dangerous.

His plan of tamponing the vagina was by means of cotton balls soaked with soapsuds, which rendered it unnecessary to use a speculum, and he believed that the vaginal canal could

be thoroughly tamponed in this way. This tamponing was followed by pains which dilated the cervical canal, and when dilatation was sufficient the child could be easily turned by bringing down a foot, and the labor went on because the pains had already been established before the version was practiced. If, however, the os was dilated rapidly, as by means of Barnes' dilators, there were no natural conditions present for the subsequent process of labor.

Dr. McLean, in closing the discussion, said that if there was one thing which Barnes' dilators accomplished it was to produce uterine contractions quicker than could be done by any other method, and it was because of this that he urged their use. The colpeurynter would excite contractions, but not so quickly, and besides it was not known, when the vagina was distended with the colepurynter, exactly how much dilatation of the cervical canal had been secured until the colpeurynter was removed, and then a rush of blood might come, which did not follow dilatation with the rubber bag.

MECHANICAL DYSMENORRHEA; RAPID DILATATION.—Prof. Theophilus Parvin, M. D., said of this subject in a recent clinical lecture (College and Clinic Record):

The patient is twenty-four years of age. She has been married six years, but has never been pregnant. She suffered from dysmenorrhea before marriage, and this suffering has been greatly increased since.

Examination shows that there is very decided antelexion of the uterus, and that the uterine cavity is peculiarly sensitive, especially in the vicinity of the internal os. I should state that the pain she has in menstruating is intermittent in character—a pain and then a pause, and thus the series goes on, just as you have in the first stage of labor a succession of pains with intervals of rest, continuing until resistance of the os uteri is overcome. Of course, in this use of the word pain we consider it the synonym of uterine contractions, a liberty of speech very commonly taken, though the contractions are not the pains, only their cause.

After the patient is etherized rapid dilatation of the cervical canal will be done. Dr. Matthews Duncan, who rejects mechanical for spasmodic dysmenorrhea, regards dilatation as the most important means of cure; his method of dilating is by bougies, gradually increasing their size, the whole process being accomplished in six or eight times, the intervals being two or three days. Of course, any dilatation to be efficient must include that of the internal os uteri. Now it makes no great difference whether the disease be called mechanical or spasmodic, when the treatment is the same. It is possible that a sensitive, irritable cervical canal may have its sensibility blunted by the repeated passage of a bougie, just as a similar condition of the male urethra is treated, and thus spasmodic contraction be prevented; but whence the necessity, if this be not a mechanical dysmenorrhea, of increasing the size of the dilating bodies, and how does it happen that in almost all cases there is some uterine deformity, anteflexion being especially frequent? In addition to a graduated set of solid uterine bougies, sponge, sea-tangle, and tupelo tents are used for dilatation. But most operators prefer an instrument devised for the especial purpose, Ellinger's dilator, or some modification of it. This dilator has two blades, but the late Dr. Sims devised one with three, and I recently showed you one made by Dr. Molesworth, having four blades. The instrument which is now shown you, and which I will use in this case, is the device of Dr. Ellwood Wilson, of this city, he having had it made some sixteen years ago; it is especially suited for cases where the flexion is great, and it further has this advantage over the "Ellinger," the blades of which move apart in parallel lines, and at least most if not all of its modifications, they having the same parallelism of movement, that it does not dilate equally, but most at the internal os, the point where the greatest dilatation is needed. Dr. Wilson has been using the instrument for many years, and his success with it certainly strongly commends it. It is probable that in no city of the United States is the use of the uterine dilator more frequent than in Philadelphia—indeed, such dilatation might be called

almost a Philadelphia operation—and I have yet to know of a serious accident following its proper employment. The dilatation may be abrupt or gradual; the latter, of course, is, as one might infer, the safer, and it may be done without an anesthetic, but it may require weeks for its accomplishment. A speculum, I mean, of course, that of Sims, or of Simon, facilitates the introduction of the dilator, but some prefer to use the instrument without exposure of the os. In this case, however, the speculum will be used, and the cervix caught by the tenaculum, so that those who are nearest may see the method as far as possible. I should have stated that there is, posteriorly to the uterus and apparently attached to it, a tumor, hard, resisting, and somewhat irregular in form, which is probably the result of an inflammation of a portion of the pelvic-peritoneum. Such inflammation, or pelvi-peritonitis, is not uncommon as a consequence of severe and long-continued dysmenorrhea. I shall have more to say upon the subject in connection with a patient to be presented afterward, and my reference to the subject now is for the purpose of stating that if such inflammation be recent, if you find sensitiveness of the inflammatory swelling, you would wisely postpone the dilatation needed in the case, lest you might kindle anew the inflammation. I now go on with the dilatation, gradually, by means of the screw at the handle of the instrument, separating the blades a half or two thirds of the distance they can be extended. Then, after keeping them thus separated for two or three minutes, I reverse the movement of the screw, bringing them together, and withdraw the instrument. I now pass into the cervical canal an applicator, wrapped with cotton, the latter being saturated with a solution of iodine in glycerine, this solution being the strength of Dr. Churchill's tincture. It is almost certain that, for a time at least, menstruation will be free from pain, and it is possible that during this interval the patient may become pregnant, for dilatation is not only a cure for dysmenorrhea, but also may be for sterility. Dilatation is resorted to almost daily in the Hospital Dispensary, and has been for years, without there having occurred in any

cases any serious results. This dilatation is usually gradual, that is, the patient comes several times before the stretching of the cervical canal is completed, and hence, probably, the happy exemption from serious consequences. The instrument there used is a modification of Ellinger's, made by Gemrig & Son, of this city, and is known as Dr. Goodell's. Dr. Goodell, by the way, is a very warm advocate of the operation.

INCONTINENCE OF URINE IN CHILDREN.—Dr. J. Lewis Smith read a paper on this subject (*Obstetric Gazette*), in which he mentioned eight causes, two of which might sometimes be present in the same case :

1. Too great acidity of the urine, causing undue contraction of the bladder.

2. Increased quantity of urine.

3. The presence of stone in the bladder, in which case the incontinence is both diurnal and nocturnal.

4. Abnormal contractile power of the muscular coat of the bladder. The importance of this cause is shown by the fact that belladonna, which controls muscular irritability, is useful in such a large number of cases of enuresis.

5. Weakness of the muscular fibers constituting the sphincter of the bladder. This is rare in children in good health, and Dr. Smith gave an account of one case in which it was associated with spina bifida.

6. Reflex action through the agency of the nerves supplying other organs in addition to the bladder. In this class are the cases due to structural disease of the spine, ascarides in the rectum, phimosis, preputial adhesions, etc.

7. The dreaming of the child that it is in a convenient place for urinating. To this psychical cause attention has been directed by Dr. Roberts Bartholow. That the enuresis is to a considerable extent under the control of the will is shown in cases where the habit has been broken up by the sending of the child among strangers or to a boarding school, where the sense of shame has constituted an influence sufficient for the purpose. Numerous

instances are also on record where a flogging has permanently broken up the habit.

8. Malformation of the bladder or its appendages. Dr. Madden has reported the case of a young lady who suffered from a constant dribbling of urine, both by day and night, in which he found, on examination, that there was a malformation of the right ureter, which discharged the urine from the kidney on that side directly into the vulva instead of into the bladder.

In the treatment the great point was to discover the cause. If the affection seemed to depend on the character of the urine, this was to be rendered as bland and unirritating as possible, and Dr. Smith said that since he had recognized the acid character of the urine as a frequent cause of incontinence he had been able to treat very satisfactorily quite a large class of cases which had formerly proved troublesome. It was his practice to endeavor to render the urine as bland as tepid water. If there was acidity he gave from three to five drops of liquor potassæ, well diluted, three, four, five, or six times a day, until the urine became neutral in reaction, and then to continue the alkali in just sufficient quantities to maintain the neutral condition.

When there was increased functional activity the great reliance was to be placed on belladonna. The tincture was the preparation commonly used in this country, and of this five drops might be given every night and morning, the dose being increased by one drop each day until the desired effect was obtained or the physiological action of the drug had become apparent. When belladonna was found efficient it was to be kept up for some weeks in full doses, and the quantity then gradually diminished. This agent had been highly lauded by Trousseau, who used it in large doses. Dr. Smith related a case in his own practice in which a girl eleven years old, who suffered from both diurnal and nocturnal enuresis, and who had previously taken belladonna and other remedies, was cured. The urine was highly acid, and the treatment which he prescribed was five drops of liquor potassæ three times a day (or more, if this was necessary to keep the urine neutral in reaction),

and tincture of belladonna in nine-drop doses, the quantity gradually to be increased to fourteen or fifteen drops.

If the enuresis were simply due to the large quantity of urine secreted, the liquid food was to be restricted, especially toward evening, and if diabetes were present, of course the treatment appropriate to that disease was to be adopted. In diabetes insipidus ergot was found to be of great service. Suspicion of the presence of a stone in the bladder would be excited by painful micturition, increased quantity of mucus in the urine, and sudden stoppage of the full stream. The use of the sound would confirm the diagnosis, and the stone could then readily be crushed. In every case of incontinence it was important to make a careful examination of the parts contiguous to the bladder, such as the rectum and the genital organs, for the existence of ascarides, phimosis, preputial adhesions, hardened smegma, etc. If the enuresis were due to paresis of the sphincter, a treatment very different from that of belladonna was required, and here ergot, either alone or in connection with nux vomica or strychnia, was found very useful in restoring the impaired innervation and stimulating muscular contractility.

A considerable number of remedies which were formerly employed to a large extent for incontinence of urine were now seldom used, but some of them were still deserving of confidence in certain special cases. Among these was strychnia. In children under four years of age there was some danger in giving it, and it was better to employ nux vomica under the circumstances, but above that age it was perfectly safe to use it. Tincture of cantharides, although as a rule an unpleasant remedy, could sometimes be employed with advantage if given in small doses. Cubebs and vegetable tonics and astringents were also sometimes called for.

Dr. Smith referred to the use of baths and douches, and to the suggestion of Trousseau, that the patient should be required to urinate as frequently as possible during the daytime.

Dr. J. W. S. Gouley said the most frequent causes of the enuresis were lithuria and polyuria, the latter being often met

with in nervous children. Children, after they became two or three years old, did not wet their clothing in the daytime, but only at night. In some instances such children retained the habit until they were grown, and he had seen men twenty-five, thirty, and forty years of age who were still subject to it. No amount of whipping could cure a child of wetting the bed; on the contrary, corporal punishment could do harm and only make the condition worse. Lithuria was much more common in young subjects than was generally supposed. When this was present there was not an accumulation of urine, but a constant enuresis, both diurnal as well as nocturnal. He believed that there should be both general and local treatment. He thought, however, that it was a mistake to attempt to make the urine as "bland as tepid water," as Dr. Smith spoke of doing. This would only increase the enuresis, as very bland urine, like pure water itself, was known to be irritating to the bladder. But in connection with the internal administration of iron, more particularly the old fashioned tincture of muriate of iron, he had often afforded great relief by the introduction of the sound or catheter every two or three days. As a rule the steel sound if skillfully used, was preferable to the gum catheter. In both girls and boys (although the number of the former he had seen suffering from enuresis was quite small) he had observed excellent results from his practice.

Dr. Smith said, in regard to chloral, that he had not tried it in this connection, but it seemed to him that if it was given in nocturnal enuresis it would only tend to aggravate the trouble by inducing more profound sleep.

RAPID DILATATION OF THE UTERINE CANAL FOR DYSMENORRHEA AND STERILITY.—At a late meeting of the Philadelphia Obstetrical Society, Dr. Wm. Goodell brought forward his experience in rapid dilatation, and its advantages, as compared with the use of tents and Sims' cutting operation, both formerly his favorite modes of treatment.

He uses two sizes of Ellinger's dilators. He considers them

best because their blades separate parallel to each other. The smaller is used to pilot the way for the more powerful one. The patient is fully anesthetized and given a rectal suppository of the aqueous extract of opium. Dr. Goodell operates through his bivalve speculum, the patient on the back. The cervix is steadied by a strong tenaculum and the smaller dilator passed up as far as it will go. Upon gently stretching open that portion of the canal which it occupies, the stricture above so yields that when the instrument is closed it can be made to pass up higher. Thus by repetitions of the maneuver, little by little, in a few minutes' time, a cervical canal is tunneled out which could not before admit the finest probe. Should the os externum be a mere pin-hole, or be too small to admit the beak of the dilator, it is enlarged by the closed blades of a straight pair of scissors, which are introduced with a turning motion. As soon as the cavity of the womb is gained, the handles are brought together. The smaller dilator being now withdrawn, the larger one is introduced, and the handles are then slowly screwed together. If the flexion be very marked, this instrument, after being withdrawn, should be reintroduced with its curve reversed to that of the flexion, and the final dilatation then made. The ether is now withheld, and the dilator kept *in situ* until the patient begins to flinch. The best time for dilatation is midway between two monthly periods.

The patient is kept in bed till pain and tenderness have passed away; rarely more than two or three suppositories are needed.

In his own words: "In the great majority of cases I dilate the canal, not to the fullest capacity of the instrument, but to one and a quarter inches. Sometimes, with an infantile cervix which does not readily yield and might give way, the handles are not screwed down more than three quarters of an inch or an inch."

The cervical canal seldom returns to its contracted or angular condition. The cervix becomes shortened, widened, strengthened, and straightened. He therefore uses rapid dilatation to straighten out anteflexed or retroflexed wombs, and to dilate

and shorten the canal in cases of dysmenorrhea or sterility from stenosis or cervical angularity. He also uses this means of dilatation to introduce tents, medicaments, the curette, to digitally explore the uterine cavity, and to irrigate the uterine cavity.

He has not a record of all cases so treated, but thinks they will number over three hundred. Out of these he has not had one case of severe inflammation, and the results have proved most satisfactory.

The following are the statistics for dysmenorrhea :

Unmarried,	80
Married,	88
Total.	<hr/> 168

Of the unmarried, eighteen were unheard from after the operation, leaving sixty-two from which any data could be obtained. Of these, thirty-eight were cured, seventeen more or less improved, and seven not improved at all. Of these seven, five subsequently had their ovaries removed. In each the ovaries had been so altered by cystic or by interstitial degeneration as to make the dysmenorrhea otherwise incurable.

Of the married, fifty-three were heard from. Of these, thirty-nine were cured, ten improved, and four unimproved. And of these fifty-three, nine were not in condition to conceive, three of them from fibroid tumors, two from destructive applications of nitrate of silver to a lacerated cervix, three from being over forty-one years of age, and one a widow.

This leaves but forty-four capable of conception, and of these, eight, or a little over eighteen per cent, became pregnant. But the ratio is in fact larger, for several, fearing pregnancy, employed preventive measures after the operation. There have been many pregnancies occurring later, of which he has accidentally heard and which have not been reported to him by the patients. The dangers of the operation are of lighting up a former cellulitis or ovaritis. Dr. Goodell has not hesitated to operate, but always uses opium first, and by the time the operation is over, the patient is under its influence. (*Am. Journal of Obstetrics.*)

ON THE TREATMENT OF RINGWORM.—Dr. J. F. Payne, in a recent clinical lecture on this subject at St. Thomas's Hospital, London, gave the following outline (*British Medical Journal*) of the course to be pursued both in early and severe cases. In an early case, after removing the hair and washing with soft soap (the latter operation should be at first repeated every day), we keep the surface of the head moistened during the day, from time to time, with a lotion. For example, boracis, fifteen grains; glycerini, one dram; aquæ, seven drams—M.; or hydrargyri perchloridi, one grain; glycerini, one dram; aquæ destillatæ, seven drams—M.; or else with glycerine of carbolic acid. At night have one of the ointments above mentioned thoroughly rubbed in, and the head covered with a cap. This treatment, with lotion and ointment alternately, should be continued for two or three weeks, or longer, till the disease has definitely localized itself in particular patches on the scalp. After this, instead of lotions, paint the patches every three or four days with either a tincture of iodine or the remedy called "Coster's paint," continuing the ointment in the interval as before. By these means a certain proportion of cases, perhaps one half, or even two thirds, will generally be cured in a few weeks, or at most in a month or two. Should the case prove more obstinate, or should we have to treat a case where the disease has already existed for some time, we slightly modify the above treatment. In place of the painting with iodine, apply blistering-fluid occasionally, or use "Coster's paint" more frequently. Blisters are dangerous in infants, and should not generally be used in children under five years of age. In such a case, depilation should be very carefully and systematically carried out (taking care to warn the parents of the temporary baldness produced). If these means do not suffice, it will be well to change the ointment, and use either a strong preparation of carbolic acid or oleate of mercury. In the circumstances here considered, washing should only be carried out about twice a week.

Should all these measures fail, and the case of ringworm be protracted more than six months, or should we be called upon

to treat an inveterate case, an entirely different method is to be recommended. The best plan here will be to apply oleate of mercury, in the five-per-cent strength, by means of a sponge—mop over the whole of the head once a day, without removing that previously applied. The head should be covered with a flannel or linen cap night and day, and should be washed once a fortnight only, or once a week at most. The result of this treatment usually is that the skin becomes somewhat inflamed; and there is, at all events, considerable seborrhea, and the scalp becomes covered with scales. It is, in consequence, difficult to tell what progress the cure is making. Accordingly, after fourteen days of such treatment, omit the oleate, wash the head thoroughly and use a milder application, such as boracic-acid ointment, till the skin is clean. We are then in a position to judge how far the disease is eradicated. If broken hairs and stumps still remain, we revert to the oleate treatment, and continue it for another fortnightly period; then clean off the scales as before. A certain amount of suppuration is no reason for stopping the oleate application; but the least soreness of the gums will make us, of course, discontinue it. I must, however, say that I have generally found some constitutional effect produced in those instances in which the oleate has effected a radical cure of the local disease. Cases which have lasted for years may often, by this means, be cured in as many months.

With regard to the constitutional treatment of ringworm, I think the state of health has little to do with the persistence of the disease. Nevertheless a change of air, removing the patient from the influences surrounding him at home, often appears to be of great benefit. I should always recommend that, in a very tedious case, the room in which the child sleeps, and the bedding, should be disinfected as carefully as in the case of any other infectious disease. These precautions have in some cases appeared to arrest the disease, which was being treated in vain by local remedies.

With regard to ringworm of the skin (*tinea circinata*), its cure is conducted on the same principles as that of *tinea ton-*

surans, but is much easier. The patches should be well painted with tincture of iodine, which is sometimes sufficient. If it should not be, wash thoroughly with soft-soap, and apply one of the parasiticide ointments above mentioned. Most cases will be cured in a fortnight.

Ringworm of the beard (parasitic sycosis) is treated in the same way as other forms of ringworm; but the amount of inflammation is sometimes so great that cooling remedies, especially lead-lotion, have to be used at first. Poultices are better avoided. In the next place, painting with iodine (if the patient do not object) is very useful, both to counteract the deep-lying inflammation and to kill the fungus. In order to effect a cure, carefully eradicate the diseased hairs and rub in one of the parasiticide ointments. The cure is sometimes tedious, but less so than in a really bad case of ringworm of the scalp.

STUDY OF THE NERVE SYSTEM OF CHILDREN.—Francis Warner, M. D., late Physician to the East London Hospital for Children, contributes an article on the Nerve System of Children to the Archives of Pediatrics, from which, for the want of space, we can take but the opening and closing paragraphs:

A physician who deals largely with children can not fail to be struck with a large proportion of cases in which symptoms produced by the nerve system form prominent points in the case. Nerve symptoms may, or may not, be those directly complained of; the mother may complain that her child is exceedingly fidgety, sleeps badly, suffers from headache, etc., or she may speak of her boy as having a hacking cough, and though he eats voraciously, still he wastes continuously. On investigation of the case signs of weakness and irritability may be found in the central nerve mechanism, with special signs of irritation of the pneumogastric nerve.

In order that the fullest nutrition of the brain may be assured, it is necessary to look to all conditions that act upon the brain, the food-supply and every thing else which may be

grouped under the term regimen, viz., exercise, light, air, changes of scene, and arrangements as to the relative amount and time of each. All these things that affect the child's nerve system are physical forces, they are not to be neglected as being mere moral forces or abstract processes of education. To regulate the time of these things acting upon the child is, perhaps, as important as to regulate their quantity and kind.

If we are seeking to render the child quieter, and less nervous, regularity is most important in all the habits of the child; let the child rise and go to bed at fixed times, let there be fixed times for the bath, the daily walks, lessons, play, drill, etc.; all these affect the automatic working of the brain, making an impression upon it, co-ordinating the rhythmical working of its parts, and affecting its receptivity to other impressions.

It would be impossible here to enter upon a full explanation of these views and the reasons for them; suffice it to say, I ground them firstly upon clinical experience, secondly upon physiological and philosophical argument.

I hope enough has been said to enforce the doctrine that in every attempt to control brain action in children, or to aid its action, we need two factors, nutrition, and forces acting upon the brain, directing that nutrition.

A less co-ordinated, steady, uniform kind of action may be desired; the child may be healthy but stupid, fat and very slow, strong but inert. Town life, and more stimulating food may be needed here.

As to articles of diet, meat, broth, beef-tea appear to produce a stimulating effect upon the nerve system of children, increasing the quantity and brain-stimulating quality of the blood. It may be specially useful in some cases of dull-brained children; it is often less useful in epilepsy and in chorea.

Fat food is very useful in chorea and for neurotic children; if these children will take bacon, butter, dripping, suet puddings, marrow from bones, and can digest them, much good usually results. Cream with malt is an excellent food here.

Farinaceous foods, in contrast to meat, offer the choice of a

dietary of great importance in practice. They are less stimulating, more quieting, less suitable to stimulate brain evolution, more suitable for cases of nervous excitability, especially if combined with fats; in such cases we want hydro-carbonaceous rather than nitrogenous diets.

As to drugs of special use in nervous cases among children, a few words may be said about arsenic, bromides, and iron. The sedative characters of bromides are undoubted, and are of great value.

Arsenic administered to children with their food has often appeared to me a great aid to nerve growth. Iron is useful in anemic cases, the non-astringent preparations being the most suitable.

RAPID DILATATION OF THE UTERINE CANAL.—Professor D. Tod Gilliam, M.D., of Columbus, Ohio, concludes a paper on this subject, in the Medical Record, as follows:

The means of rapid dilatation resolve themselves into two classes, that is, sounds and diverging blades. In using the sounds the patient may be placed either on the back or in the Sims' position. If on the back, a Nott's speculum will be found most advantageous. The cervix now being fixed by a strong tenaculum, one of the smaller dilators is introduced. In performing this maneuver care should be taken to direct its course in conformity to the trend of the canal, as previously ascertained by the uterine probe. If there be much difficulty in passing the internal os the probe may again be introduced, and will then act as a guide to the dilator. In such cases it is always better to place the patient in the Sims' position and use the Sims' speculum. To one not accustomed to the use of the Sims' method for the purpose in question the facility of introduction secured by it will be something surprising. The operator must bear in mind that the cervix is very extensible, and under the opposing forces exerted by the tenaculum and the dilator often becomes much elongated. This may prove misleading, inasmuch as he may think that he has passed the inter-

nal os when in reality it has been pushed before the point of the dilator. He will know when he has passed it by the freedom with which the instrument can be advanced into the uterine cavity, the latitude of motion which can be communicated to it, and by its remaining *in situ* when left to itself. If, on the other hand, it has not passed, it will rebound when the pressure is removed. One after another of the graduated dilators is introduced successively, allowing a few minutes' sojourn for each, until a degree of dilatation commensurate with the needs of the case has been attained. Unfortunately, as ordinarily made, these dilators do not run above No. 18, American scale for sounds, and are inadequate for permanent good.

A dilatation, in order to be effective and permanent in its good effects, should give a circle of at least one half to three fourths of an inch in diameter. Such a dilatation once accomplished will seldom need repetition, and will in most cases permanently relieve the angularity or stenosis upon which may depend the sterility or dysmenorrhea. For full dilatation the patient should always be thoroughly anesthetized, and it is a good plan to follow the example of Prof. Goodell by exhibiting a rectal suppository containing a grain of the aqueous extract of opium before beginning. In the use of expanding dilators I have finally adopted the Ellinger. This has the advantage of a fulcrum support not far removed from the beak, a great degree of expansion, and a parallel action of the blades. This latter I deem of much importance in all cases of extensive dilatation, as there is much less liability to injure the uterine structures than when the blades diverge like those of a pair of scissors. There is, however, something of a tendency of the blades to slip, and unless care be exercised the cervix may be torn by an accident of this kind. The instrument being introduced with the blades closed, in the same manner and with the same precautions described above, the blades are separated by a gradually increasing pressure on the handles. I do not intermit the pressure, as advised by some, but push the dilatation steadily and as rapidly as a feeling of safety for the general integrity of the cervix will

permit. As a true divulsion is the object in view, there should be no mincing, but a steady, inexorable advance, so that the tissues may be quickly and effectually overawed and subjugated. As a rule the dilatation should be carried to the full capacity of the instrument, which, making allowance for the spring of the blades, will be about an inch. Exceptionally one will have to deal with an undeveloped cervix, or one so brittle that he will not feel safe in proceeding so far. In these cases he will content himself with less radical measures, but will usually find that a repetition becomes necessary if he would benefit his patient. After the lapse of some weeks he will not infrequently be gratified to find evidences of development in the hitherto immature cervix, and may now be able to perfect his work. Occasionally several sésances will be necessary before full dilatation is accomplished, but these should always be at intervals of several weeks, in order to give time for the completion of the nutritive changes inaugurated thereby.

Since becoming familiar with the use of the Ellinger instrument I seldom use the sounds, except in a supplementary way. When there is difficulty in effecting introduction one of the smaller sounds will frequently open the way more advantageously than any thing else, and I sometimes follow the Ellinger with one of the larger sounds, which by its uniform pressure at all points conduces to those nutritive changes by which absorption and reposition are effected and the uterine canal finally straightened and enlarged. It has become the fashion among operators to reverse the instrument after full dilatation, so as to make its curve antagonize that of the uterine canal, and thus to bend the womb in the opposite direction. This I seldom resort to, feeling that the risk of injury to the uterine structures by the beak of the instrument more than counterbalances the advantages sought. Dilatation having been accomplished, the dilator is allowed to remain in place for some moments, when, being withdrawn, a solution of bichloride of mercury, one to one thousand, is applied to the canal. I sometimes use iodoform in its stead, which I throw into the cervical

canal by means of an insufflator. I never use the uterine plug, from a distrust of its safety and for the reason that a perfect dilatation will in time work its own changes.

I have no fixed rule as to the length of time my patients are kept in bed after the operation, being governed entirely by the indications. So long as any tenderness of the pelvic region manifests I enjoin quietude, irrespective of the lapse of time. If much pain or febrile reaction declare at any time, I resort to the use of opium, and push it to the extent necessary to abolish all sense of discomfort. This is maintained so long as there is any evidence of inflammatory trouble, and is backed by the use of poultices or fomentations to the hypogastrium. In the use of antiseptics and other means to combat sequences one should be governed by general principles. In some cases there will not ensue the slightest disturbance, and such patients need be confined but a few days, but should always be warned to keep comparatively quiet for at least two weeks.

HYDROCHINON, A NEW ANTIPYRETIC.—F. Kinnicutt, M. D., of New York, concludes an article, in the *Medical Record*, on this recent addition to our means for reducing temperature, as follows:

1. That in hydrochinon we possess a new and most efficient antipyretic.
2. That its use is apparently unattended with any injurious effects.
3. That the antipyretic effect of single doses is comparatively temporary, resembling in this respect that of kairin, thallin, and antipyrine; that the maintenance of moderate temperatures in hyperpyretic conditions can be safely obtained, however, by repeated doses.
4. That while apparently without effect in arresting a specific disease process, its employment is conservative and productive of a marked amelioration of many of the symptoms incident to high temperatures.
5. That with our as yet limited experience with the drug, it should be given prudently and its effects carefully observed.

Notes and Queries.

ILLINOIS STATE MEDICAL SOCIETY.—The following officers were elected for 1885-86. Dr. W. A. Byrd, of Quincy, President; Dr. T. W. Kirk, of Atlanta, First Vice-President; Dr. A. Wetmore, of Waterloo, Second Vice-President; Dr. S. J. Jones, of Chicago, Permanent Secretary; Dr. Herman Luce, of Bloomington, Assistant Secretary; Dr. Walter Hay, of Chicago, Treasurer.

THE KENTUCKY STATE MEDICAL SOCIETY.—The thirtieth annual meeting of this Society was held during the last week of June at Crab Orchard, and though we are happy to present our readers with two of the essays read, we regret that the report of the proceedings arrived too late for insertion in this issue.

The programme was full of promise, and the proceedings show that much honest scientific work was done. The registry was unusually large, and many new members were accorded a hearty welcome, among which were two M. D.'s of the gentler sex, who were received in the spirit of sociological advancement and reconstructed chivalry.

No questions of ethics or personal pique were suffered to disturb the equilibrium of the deliberations, and such questions of medical politics as are inseparable from organizations of this character were referred without dissent to appropriate committees.

The officers elected are representative of the Kentucky profession, and in this judicious selection the Nominating Committee takes hostage of the future by making sure the successful management of the next meeting.

The banquet tendered the fellows by the courteous managers of the Springs was a gastronomic success, and contributed in full measure to the general good cheer. Take it for all in all, it

may be truthfully said that the thirtieth celebration of the Society's birthday was well worthy of the auspicious event, and prophetic of brilliant achievement at the hands of its many industrious, enthusiastic, and ambitious fellows.

Editor of American Practitioner:

Since the publication, in the May number of your journal, of my article on The Treatment of Cholera Infantum, I have received from so many physicians inquiries as to the exact manner of giving the drugs I recommend, that I send a couple of formulæ which, I need hardly to remark, though by no means the only mode of combination or dosage, are simply the prescriptions I more generally use.

Before proceeding further, I wish to say that it is my opinion, founded upon a considerable experience, that fluid extract of belladonna alone, given in sufficient doses to produce its physiological effect in a slight degree, will promptly control the vomiting and purging in these cases. It is well when prescribing this remedy to inform the parents of the patient that it sometimes produces its characteristic rash, otherwise you may be summoned to the patient unnecessarily. I have found the following prescription absolutely infallible in controlling vomiting and diarrhea, though, of course, I do not invariably use this particular form—yet I do *always prescribe belladonna* in cholera infantum.

R. Belladonnæ, fl. ext., ʒj;
 Tr. opii camph., ʒiiss;
 Sodii sulphite, (vel bicarb.), ʒiiss;
 Syr. limon., q. s. ad., ʒiij.

M. Sig: Teaspoonful every two or three hours, or more frequently if necessary to control vomiting and diarrhea. [For a child of one year.]

To be followed by tonic treatment something like the following:

R. Quin. sulph., gr. xxiv;
 Hall's sol., }
 Fowler's sol., } aa gtt. xlviij.

Ft. Sol. of quinia in acidulated water; add the other solutions and aq. dest. q. s. ad ʒj. Sig: Ten drops in a teaspoonful of elix. of liquorice.

Theoretically, I believe that belladonna would be an invaluable addition to Squibb's cholera (Asiatic cholera) mixture.

W. B. RYAN.

WILLOW BRANCH, IND.

AMERICAN PHARMACY ABROAD: FAIRCHILD BROS.' SUCCESS.—Mr. E. Burrows recently gave, before the London Medico-Chirurgical Society, a demonstration on the various digestive ferments, especially trypsin and vegetable and animal diastase, and illustrated it by numerous experiments. He first added some extractum pancreatis (Fairchild), supplied by Messrs. Burroughs, Wellcome & Co., to milk, and in a few minutes he showed that no casein was precipitated on the addition of hydrochloric acid, it having been converted into peptone. Specimens of peptonized milk were handed round, which had no bitter taste whatever, and also some peptonized beef-tea, where the proteid constituents had been converted into peptones by the action of the trypsin ferment of the extractum pancreatis. Mr. Burrows then showed, in the usual way, how rapidly the pancreatic diastase in the same extract converted starch into glucose and the intermediate products of digestion; and the same action was shown to take place with the Kepler extract of malt. Some delicious foods, as jellies prepared with peptonized milk and fruit-juices, were distributed for the members to taste. For general use, in peptonizing milk, the powders contained in glass tubes were recommended, each containing five grains of extractum pancreatis and fifteen grains of soda-bicarbonate, the quantity required to digest a pint of milk in twenty minutes. Half a dram of the extract of pancreatis and twenty grains of soda would digest a quarter of a pound of raw meat, according to directions, in three hours. The "tabloids," each containing three grains of the pancreatic extract, were very useful for direct administration, as also the pepsin tablets, containing a grain each of pure pepsin in scales.

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